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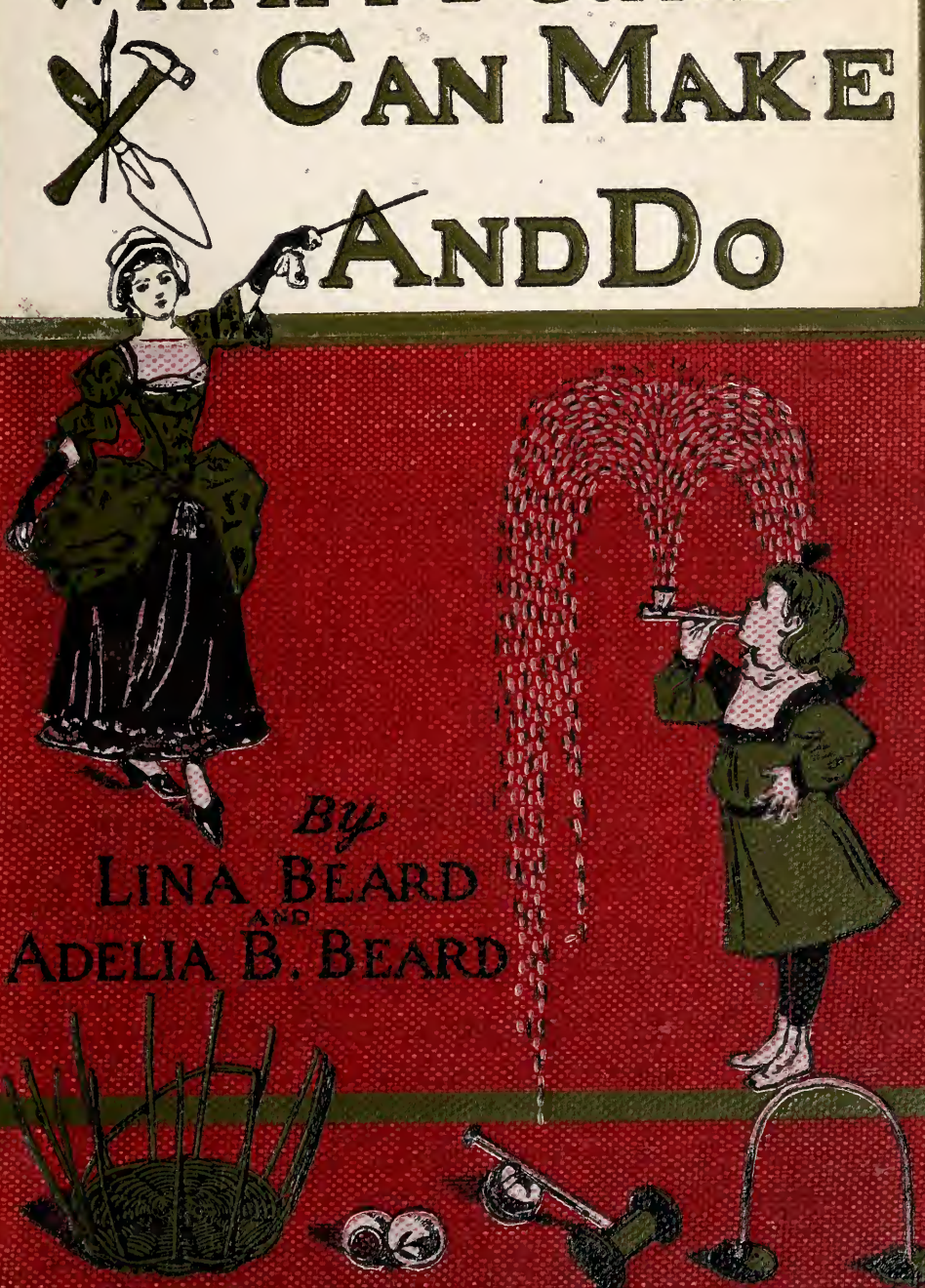

By
Lina Beard
and
Adelia B. Beard

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New Ideas for Work and Play

WHAT A GIRL CAN MAKE AND DO

BY
Lina Beard
and
Adelia B. Beard

New York
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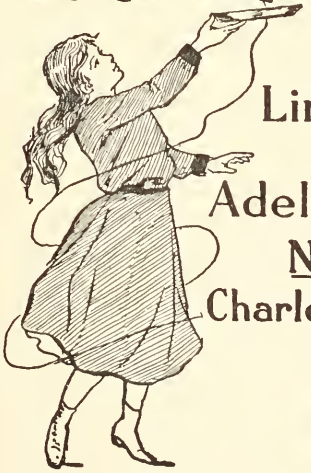
1906



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PREFACE

THIS new century, bringing with it the strong, healthy, independent, athletic American girl, makes a demand for new opportunities for the exercise of both mind and body. Resourcefulness and a wish to do things for one's self are American traits strongly developed in the girls as well as in the boys; and, keeping step with their brothers, our girls are walking steadily onward, with new hopes and new ambitions in work and play, and are reaping new rewards.

This book is the result of the authors' earnest desire to be of some assistance to their young friends by encouraging them in their wish to do things for themselves, and by pointing out some directions in which they may gratify this ambition. Within its covers are suggestions for a wide variety of things, useful, instructive, and entertaining, which a girl may make and do, with wholesome and genuine pleasure. The ideas that are worked out are essentially those of the authors, and are not, as is often the case, derived from other books. The drawings, too, are all original, as in "The American Girl's Handy Book," to which this is a companion volume.

In conclusion the authors wish to express their sin-

cere thanks to the *Delineator* and the *Woman's Home Companion*, whose prompt and generous courtesy, in returning such original drawings and material as were used in their respective magazines, has greatly facilitated the preparation of this work and added to its interest.

FLUSHING, June 16, 1902.

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PART I

WHAT A GIRL CAN MAKE

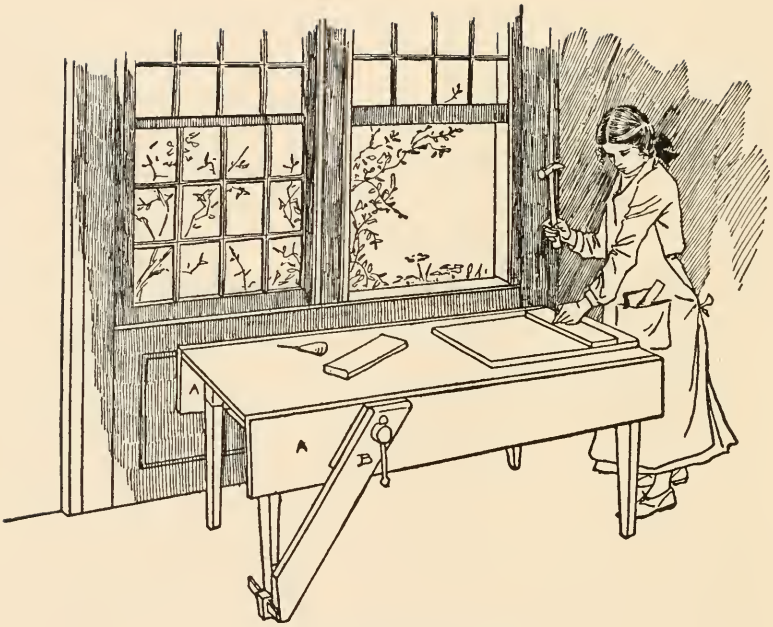


Fig. 9.—The Girl at the Bench.

CHAPTER I

WHAT A GIRL CAN MAKE WITH HAMMER AND SAW

THIS is an age when girls go to college and engage in athletic sports; when they have their manual training, as boys do and are learning to use their hands, as never before, in all sorts of skilful work. The deftness of their fingers is utilized not alone in embroidery, or what was once considered girl's work, but in the manufacture of many useful, artistic, and beautiful objects once thought beyond their reach. Our girls no longer resort to the scissors to sharpen a lead-pencil or to their brother's chisel to pull out tacks; they are beginning to know and appreciate the value of tools and are becoming proficient in their use.

If you are one of these modern girls, girls of the twentieth century, who like to use both brains and hands, a little workshop stocked with a few good tools and material for carpentry work will give you many hours of pure enjoyment. The tool-chest, denied to girls of the past generation, is yours for the asking; the manual training in the public schools has given to many of you the advantage of learning the use of saw, plane, and hammer, and your

physical culture has produced the strength and energy for this active work.

The Workshop

Just a room, any room, that will afford sufficient light for your work, that is all you need for a beginning. Having the room you have a place for your first tool, if it is necessary to collect them one at a time, and it is much better to do that than to buy a cheap tool-chest. When you have one tool make a place for it and keep it in its place. A hammer, a saw, a hatchet, a sharp knife, a screw-driver, a gimlet, and a rule are the first tools you will need. The writer once made a very good mantel-board, cleated at the ends with rounded corners, which has stood the heating and drying process of many winters over an open fire, without warping, and her tools were simply a hatchet, a meat-saw, and a pocket knife. Of course, the work would have been much easier and more enjoyable had she possessed the proper tools, but this example serves to show how few tools are absolutely necessary. A plane, a chisel, and an auger-bit and brace will be needed later; after that a gouge, a try-square, and a file. These you may collect by degrees as your work grows more ambitious and you feel the need of them. Hooks, nails, tacks, and screws can be bought as required.

Have a hook for your saw and hang it up, lay your plane on its side, make a rack for your small tools something like Fig. 1, and have a box for your shavings. A shelf on which to keep your boxes of tacks and other small articles is indispensable; each of these boxes should be labelled and kept in its place; in fact, to get the full enjoyment from your workshop you must keep it in order and the tools just where you may always expect to find them.

What the Tools are for and How to Use Them

The Hammer.—A carpenter's hammer is what you want, not a tack hammer, and it should be of medium weight. You are to use it in driving nails, in hammering things into

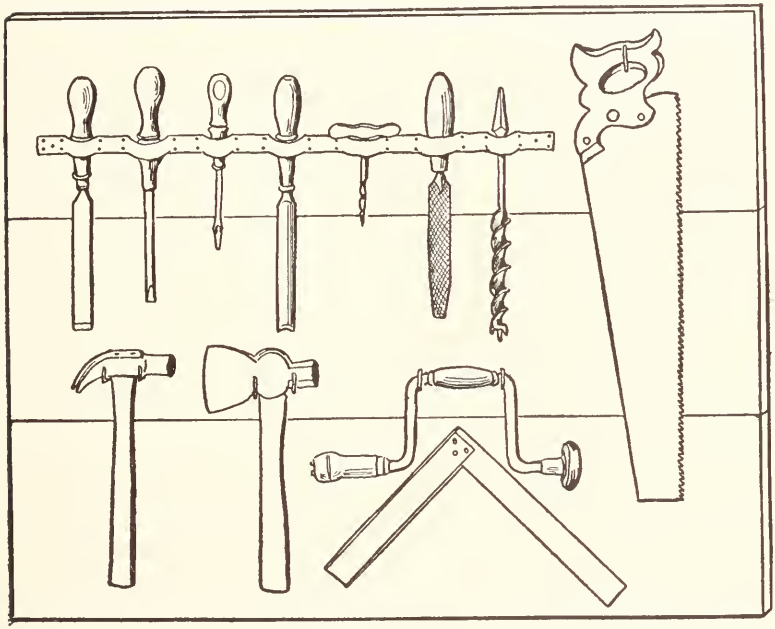


Fig. 1.

place and in various ways not injurious to the hammer. The manner in which you hold this tool will make all the difference in the way you drive a nail. The hammer should be taken by the end of the handle and the head brought down squarely on the nail-head, otherwise the nail will slant to one side or perhaps bend.

The Saw.—The panel-saw is best suited to ordinary work, one having about ten teeth to the inch. Finer saws make a smoother cut, and you will probably find use for several, but one is enough to begin with. The saw is used for cutting large pieces of wood and for cutting across grain, and special saws serve for special purposes, such as sawing of curves and cutting out keyholes. With pencil and rule draw the line you wish your saw to follow. Stand above your work so that you may see the pencil line; hold the saw firmly in the right hand and with the left grasp the board, allowing your thumb to rest on the saw, above the teeth. This is to help guide the saw and to prevent cutting your hand. Take light, short strokes at first, then longer ones, using a little more force, and keep your saw at right angles with the board. If your material is large and heavy place it across two wooden horses, if light or small it is best to use a mitre-box.

The Hatchet.—You will find a good medium-sized hatchet with a sharp edge very useful, for cutting away or trimming, but it must be used with care, for to chop too vigorously will frequently split the wood. See that your hatchet does not follow the grain of the wood unless the grain runs in the direction you wish your cut to take.

The Knife.—Not a dainty pearl-handled pocket-knife but a strong, well-made, sharp-bladed jack-knife, large enough for all kinds of whittling. The knife is for fine cutting that cannot be done with the hatchet, and when one learns to whittle out various small articles much has been accomplished.

The Screw-driver.—It has been said that the feminine mind cannot grasp the difference between a screw-driver, a corkscrew, and a gimlet, and it remains with you to prove the contrary. A poor screw-driver is one of the most exas-

perating of poor tools, and a trial to one's patience and temper; besides, it is of little use attempting to "make it do," for it seldom will do. The edge is usually shaped like Fig. 2, and it slides and slips out of the groove of the screw until it has turned and worn down its edges and made the screw useless. Fig. 3 shows the proper shape for a screw-driver. The use of the tool is, of course, to put in and take out screws, and it is well to have two sizes, one for large, the other for small screws. Remember that in putting in a screw you turn it to the right, and to the left in taking it out.

Fig. 2. Fig. 3.

The Gimlet.—A medium-sized gimlet will answer your purpose. Use it for boring small holes and for starting holes for screws and large nails.

The Rule.—A rule is indispensable for measuring and laying out your work. A two-foot steel rule is the most useful, as it can be used both for measuring and ruling straight lines. A light folding rule is easier to handle in taking measurements, but you can make the other answer both purposes.

In taking measurements be as accurate as possible, and go over them several times to make sure they are correct. In ruling a line use the bevelled edge of the rule, hold it firmly in place with your left hand, and with a soft pencil in your right draw a line close to the edge of the rule. The wide, rather flat carpenter's pencils are the best to use, but any soft lead-pencil will answer.

The Plane.—There are several kinds of planes, but the smoothing-plane will probably be all you will need, as you will not be likely to attempt to handle unplaned wood and will need the smoothing-plane only for finishing and smoothing off.

In using the plane hold it back of the iron (or blade) with your right hand, place your left on the stock (or wood) at the other end to help guide it, and push it forward as far as you can conveniently reach, bring it back, tipping it away from you in so doing, and take another stroke.

The farther the edge of the iron projects through the stock the deeper will be the cut and the thicker the shaving. To regulate this, tap on the stock at the forward end and loosen the iron, then adjust it to suit your work and fix it in place by driving down the wedge, which holds it, with a few light taps.

The Chisel.—This tool has a bevelled edge and is used for paring off the wood.

Unless you are quite careful there is danger of cutting your left hand in using the chisel, and it is best not to try to hold the work, but to fasten it in the vice; your left hand placed on the tool will steady and control it.

Auger-bit and Brace.—For drilling large holes the auger-bit and brace are necessary. The bit resembles a gimlet in its spiral edge, but is not wedge-shaped, and the hole it makes is of unvarying size. You may have several bits for large or smaller holes. The brace is a handle which fits on the top of the bit, and makes it quite easy to manage.

Fig. 4.

Fig. 5.

The Gouge.—There are several kinds of gouges, the difference being in the shape of the blade; their curves vary from the shallow curve, Fig. 4, to the deeper one, Fig. 5. One with a moderate curve will prove the most useful. As the name suggests, the gouge is for gouging out the wood where it is necessary to make a groove, but be careful not to press too hard on the tool at first, as one is apt to make too deep a cut, and do not put your left hand in front of the blade.

The Try-square.—The square is a metal strip which forms an exact right angle and is used to test one's work and keep it "square"; it is also used for ruling square corners. Fig. 6 shows its use in squaring off the end of a board. Figs. 7 and 8 show how the try-square will fit on an edge that is perfectly square and will not fit an imperfect one.

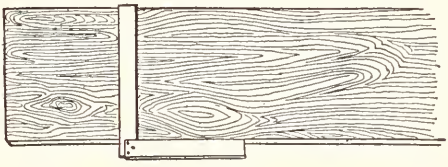


Fig. 6.

The File.—This tool is not indispensable, but is useful for smoothing off rounding edges and rough corners. Files for metal and those for wood differ, and should not be used indiscriminately. Rub the file back and forth over the sur-

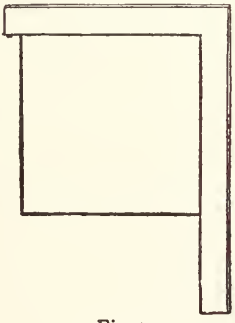


Fig. 7.

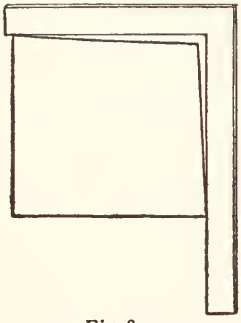


Fig. 8.

face to be smoothed, but do not press on it too heavily. If you are to use metal in your work a metal file is necessary. For wood a slightly curved surface is best.

The Carpenter's Bench

When you can attain to a regular carpenter's bench you will indeed be happy, but until then use a strong kitchen

table that sits firmly on the floor or, better still, is fastened so that it cannot move. Have a carpenter add sides (*a*, Fig. 9), and a vice (*b*, Fig. 9). *See page 2.* You can hardly get along without a vice, for it is impossible to hold some of the work firmly enough without it.

The Horses

These wooden horses are convenient for holding boards when they are to be sawed, and for lifting work from the floor. You should have two of them, like Fig. 10, made by the carpenter.

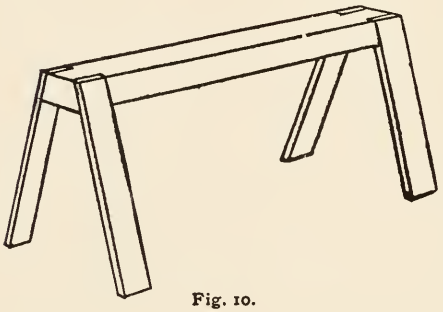


Fig. 10.

The Mitre-box

This very useful contrivance is simply three pieces of narrow boards put together in the form of a box, having two sides and a bottom, but no ends or top. Eighteen inches is a suitable length, and its height should be no greater than the width of your saw. The mitre-box is used for holding the wood and guiding the saw at any angle. In the sides of the box are slits running from top to bottom, some passing diagonally, some at right angles through the boards. Any carpenter can make you a mitre-box; do not attempt one yourself, for to be of use it must be accurately made in every particular.

Choosing the Wood

It is well to know a little about what kind of wood to select when you are buying your material, for if you wish to make a durable article, one that will last long enough to

pay for the making, you should not use wood that will warp and in a little while spoil your piece of work.

The heart-wood is always the best: this consists of boards cut from the heart, or centre, of the tree; they are harder, dryer than others, and less likely to warp or twist. The sap-wood, which is the part nearer the surface, contains so much sap it is difficult to season and will generally warp.

Select the boards yourself if possible, and see that they are planed equally on both sides and have square edges. Do not take a cracked board, a board with knot-holes or loose knots, or one that seems damp or musty, and be sure, if you can, that all your wood is well-seasoned.

Soft woods are best for your purpose at first, and while pine is very good, white-wood is better, and is easily worked.

What to Make

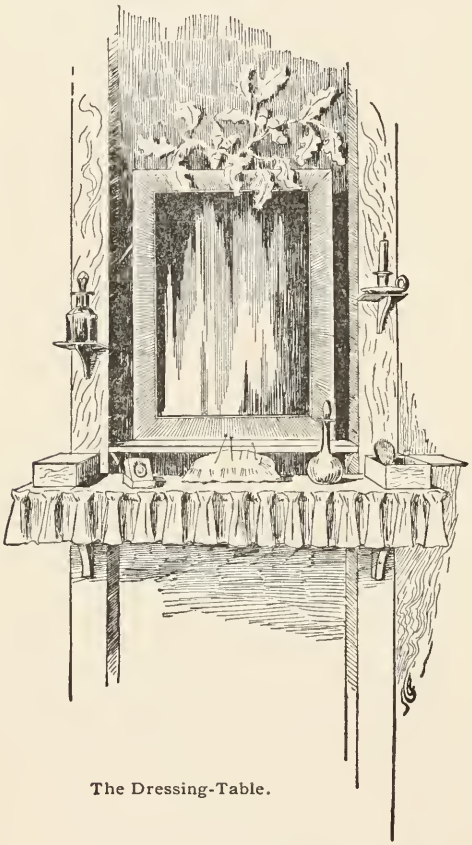
And now that all is ready and the workshop well stocked, what shall we make? What shall we not make, rather? Suppose we begin with a few simple pieces of furniture suitable for a summer cottage, a log-camp, or a play-house. We will use boxes, clothes-horses, or anything of the kind that will make a good foundation for the article and save extra work. When you feel that you can construct a piece of furniture without such helps, do so by all means, but at first do not scorn the humble box and barrel, they are excellent things to practise on.

We will start with

A Dressing-Table

Since the writer made one herself for her room in a log-house in the mountains of Pennsylvania, she is quite sure it can be done with very little practice in carpentry or cabinet-

making. The dressing-table is made of two pine shelves, two cigar-boxes, two small brackets, and an ordinary mirror. For the large shelf choose a board about twelve inches wide or wider, if you have one, measure the space your dressing-table is to occupy, mark the size on the board with a pencil, using your try-square to make your line at right angles with the edge of your board, and saw off the board at the ruled line. If the room is neither plastered nor ceiled and the uprights are left uncovered, let the large shelf reach across from one upright to the next, and make the smaller shelf just long and wide enough to fit in between. Saw out your supporting braces after the pattern given in Fig. 11, with the grain of the wood running up and down, making six in all; two for the large shelf, two for the small shelf, and two for the little side-brackets. Draw a line at each end of your shelf where



The Dressing-Table.

the brace is to be fastened, and on this line bore two holes entirely through the board. With screws long enough to reach through the shelf and into the braces fasten the shelf and braces together, Fig. 12. Bore a hole near the bottom edge of each brace, as in Fig. 13, and directly over each brace screw into the top of the shelf, as near the edge as possible, a screw-eye, Fig. 14. Cover both shelves with pretty cretonne, putting a ruffle on the large shelf and drawing the material neatly over the edges of the smaller one.

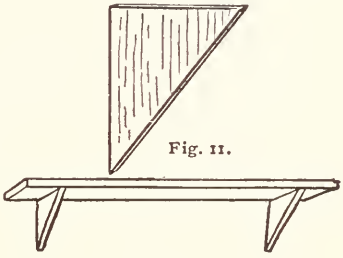


Fig. 11.

Fig. 12.

Fig. 13.

On each end of the large shelf tack a cigar-box, which you have previously painted white. These boxes are for holding brushes and combs. Screw strong hooks into the uprights at the proper distance from the floor, then hook your large shelf on by the screw-eyes at the top, and screw the braces to the uprights through the holes at their lower corners. The upper shelf, not being so heavy, needs only the hooks and screw-eyes to support it, and screws at the bottom of the braces are unnecessary. Hang this only a little way above the other shelf. Make the small brackets of thinner wood and let them be square, of a size to fit the uprights. One brace for each bracket is all that is necessary, and the braces must, of course, be smaller than those used for the shelves. Paint the brackets white like the side boxes; enamel paint is the best to use, as it gives a

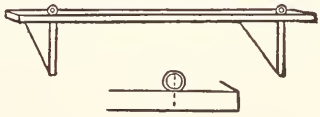
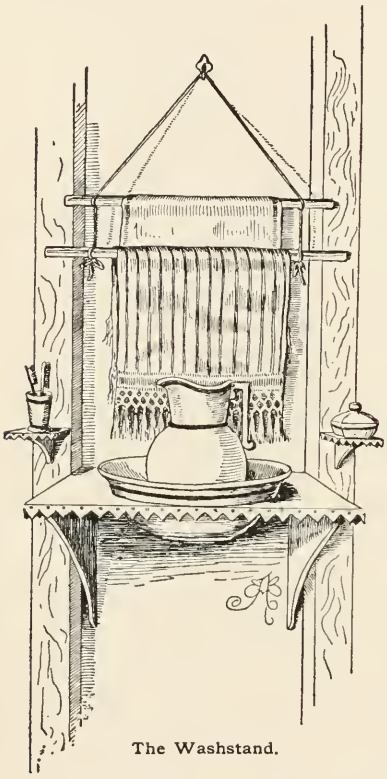


Fig. 14.

hard, smooth surface. Only the hooks and screw-eyes are required to hold the brackets. Hang the mirror with its bottom edge resting on the top shelf, as shown in the illustration.



The Washstand.

A Wash-stand

to go with the toilet table is constructed on the same principle; the shelf used for this, however, must be wider in order to hold the wash-basin. If cutting a round hole in the shelf, like Fig. 15, is too difficult, do not attempt it, but leave the surface plain and place your bowl on top.

Make your braces quite strong and screw them to the wall. Make side-brackets, as for the dressing-table, and cover them and the shelf with white enamel cloth. Cut the edge of this in points, turn it over and tack to the edge of the shelf with white-headed tacks. The illustration will give you an idea of the appearance of this wash-stand. For

The Towel-rack

use two broom-sticks, cut one shorter than the other, and paint them white. Fasten them together with strong cord, leaving a six-inch space between, and hang them over the

wash-stand as shown in the illustration. Though the top stick is shorter than the other, both must be long enough to reach across and rest against the two uprights of the wall. This allows space at the back and gives plenty of room for the towels.

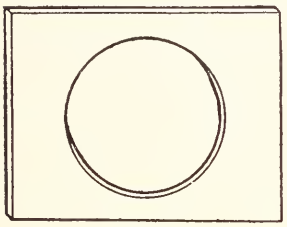
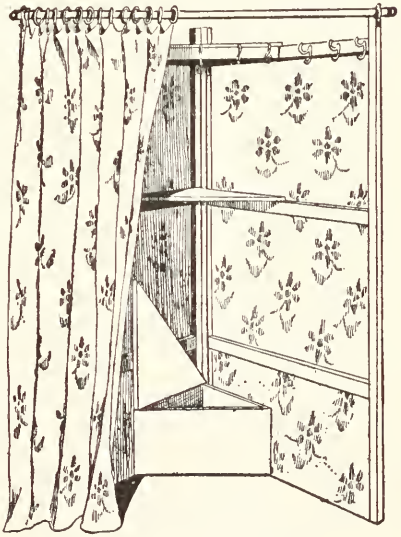


Fig. 15.

A Portable Corner Clothes-press

Use two folds of an ordinary, large-sized clothes-horse for the frame of your clothes-press. Make two three-cornered shelves with back edges at perfect right angles and measuring half the length of the cross-pieces of the frame. These shelves are to rest on the cross-pieces, therefore you must saw off the corners at the back in order to make it fit, Fig. 16. Across the outer edge of the top shelf nail securely a strip of wood three inches wide, having its top edge on a level with the top of the shelf, Fig. 17. Into this strip, as well as into the top cross-pieces, screw clothes-hooks, placing them about eight inches apart. With short wire-nails, or screws if you wish your press to be very strong, fasten the top shelf on the upper cross-pieces and the other shelf on the middle cross-pieces



Portable Corner Clothes-Press.

of the frame. Paint the shelves and the inside of the frame white, and over the outside tack flowered cretonne or chintz, remembering to have the right side of the material turned inward. Fasten a brass or galvanized iron rod to the top of the two front uprights and from this hang a curtain of the same material. To fit the holders, or fasten-

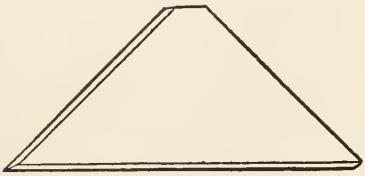


Fig. 16.

Fig. 17.

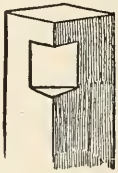


Fig. 18.

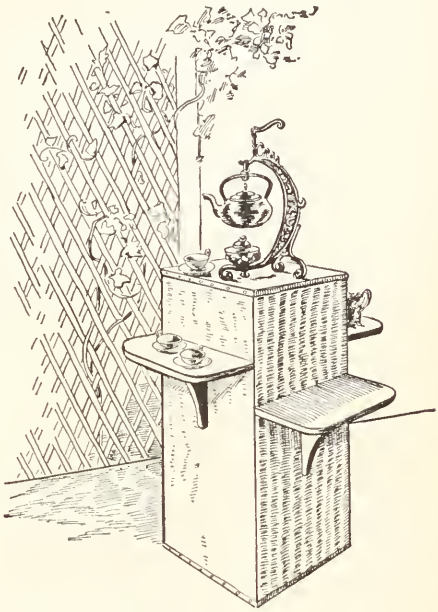
ings, for the curtain rod it will be necessary to cut notches in the inner corners of the uprights, Fig. 18, otherwise they will not be at the proper angle to hold the rod. To prevent dust from settling upon the clothing, tack a three-cornered piece of cretonne over the top of the frame. The shoe-box shown in the illustration is not a part of the clothes-press, but is a convenient addition.

A Five O'clock Tea-Table

Make this of an oblong box with square ends and of a convenient height when set on end.

Cover the box neatly with matting or burlap, then make four shelves long enough to reach across the sides of the box and about nine inches wide. Round off the corners of the shelves as in Fig. 19 and make one brace for each shelf. To each side of the box at varying heights fasten with screws two narrow strips of wood or cleats, two inches apart, Fig. 20. Screw the braces to the shelves and paint all to match the color of the covering used on the box;

then rest the back edge of the shelf on the cleats prepared for it and screw the brace to the box and the shelf to the cleats, Fig. 21. Thus securely fastened the shelf becomes immovable and there is not the slightest danger of its slipping or tipping. The illustration shows how the shelves are placed. This little tea-table is especially suited to the piazza, which, from your workshop, you may fit up for a place to entertain your friends most delightfully.



A Five O'clock Tea-Table.

A Piazza Flower-stand

will make a charming feature of your summer parlor, for flowers are always needed to give the finishing touch in beautifying the inside or the outside of a home.

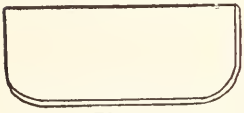


Fig. 19.

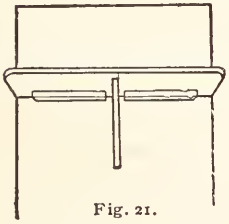


Fig. 21.

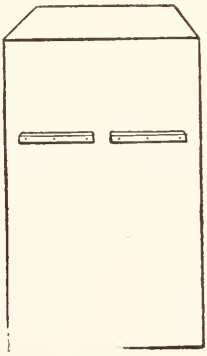
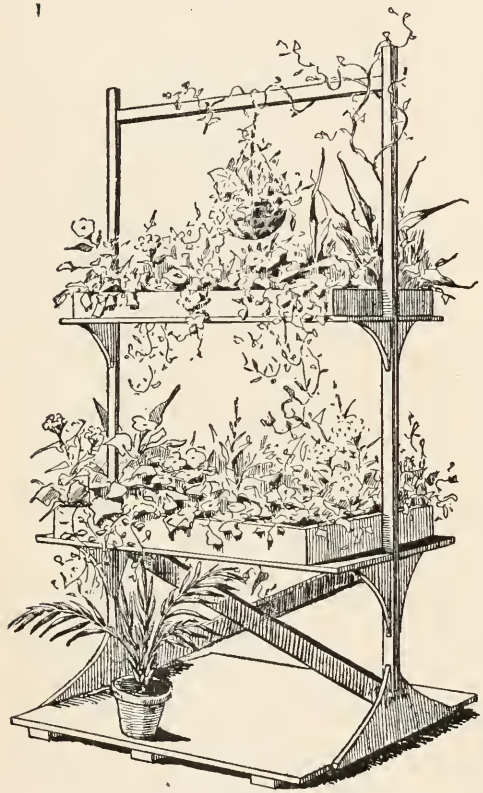


Fig. 20.

For the frame of the flower-stand use one fold of the ever-useful clothes-horse. Make twelve three-cornered braces, cut-

ting them out like Fig. 22, four measuring seven inches on their edges, four nine inches, and four twelve inches or as long as the width of the board will allow. Saw out four shelves which will reach exactly across the frame, two of them nine inches and two eleven inches wide. Screw the smaller braces to the narrow shelves, the larger ones to the widest, making sure the back edges of shelf and brace are on an exact line; fitting them in your try-square will assure you of that. To give additional strength to the frame, measure the distance from the bottom edge of the lower cross-piece, where it joins the upright, diagonally across to the other upright within one inch of the floor (Fig. 23), then take two narrow boards, say three inches wide and one inch thick, and saw them the required length. Lay your frame down flat, place first one diagonal in position, then the other, and make a pencil line across the upper and lower corners showing where they must be taken off in order to fit inside the frame. A mitre-box is



Piazza Flower-Stand.

very useful here, for by its aid you can saw your boards at the required angle without difficulty. Lacking that, be careful to have your edges straight. Place the diagonals in position in the frame and mark the width of each on the surface of the other where they cross. Between these two lines, on the edges of the boards, draw a line which will divide the edge exactly in half. Saw along the oblique lines down to the line on the edge, then with a chisel pare down to the edge lines, thus "halving" your boards, Fig. 24.

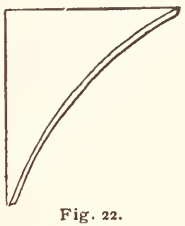


Fig. 22.

Cross your diagonals at the halving and with long wire nails, driven from the outside of the frame, nail them in place, Fig. 25. Now fit the largest braces on the front and back of each upright with edges resting on the floor as in Fig. 26, and screw them on with screws near the top as shown by C and D, Fig. 26. Have the outside edges of the braces on a line with the outside edges of the uprights; this will leave a space of about an inch on the inside of the uprights. The braces will hold the frame in an upright position, but in order to support any weight it must be further strengthened by adding a platform to which the braces may be screwed. Make the platform of a size to fit inside the uprights and reach across from end to end of the braces. Two or more boards will be required to give sufficient width, and it will be necessary to stay them by putting on three

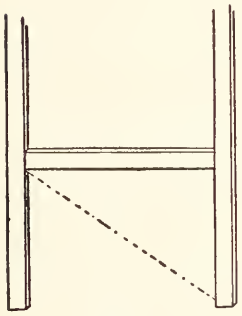


Fig. 23.

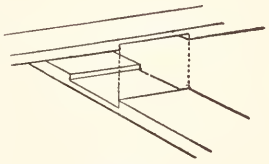


Fig. 24.

cleats across the under side, as in Fig. 27. These cleats must be of equal width and thickness and, as in all cleats, the grain of the wood must run lengthwise. Cut notches at each end, as shown in the diagram, to fit the projecting uprights, then fit the platform into the frame, and screw the braces on to its edges, Fig. 28. You have now a firm foundation and may add your shelves. The widest shelves are to go across the frame on either side on a line with the top of the lower cross-piece, the narrower shelves on a line with the top of the middle cross-piece. Fasten these in place with screws at the lower end of each brace, and with hooks in the uprights, and screw-eyes at the top of the shelves, as in the shelves for the dressing-stand, Fig. 14.

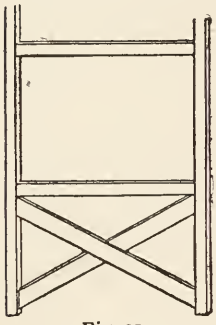


Fig. 25.

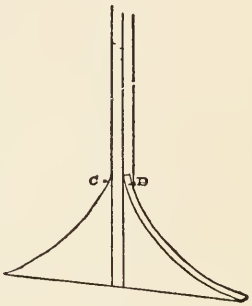


Fig. 26.

Instead of four you now have two very broad shelves, running directly through the frame. Take measurements of these shelves and make a shallow box, about seven inches deep, to fit each shelf. To prevent the boxes springing at the seams from dampness, get a strip of tin three inches wide, bend it through the middle lengthwise, and tack it over the seams, as in Fig. 29. Paint the entire frame and the outside and edges of the boxes dark green, and then varnish

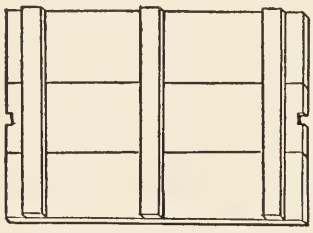


Fig. 27.

them. Of course the paint must be quite dry before the varnish is applied.

Put a layer of charcoal in each box, then a layer of sand, and over all a thicker layer of good soil. Fill your boxes with flowering plants and hanging vines, and use the lower platform for potted plants. From the top cross-

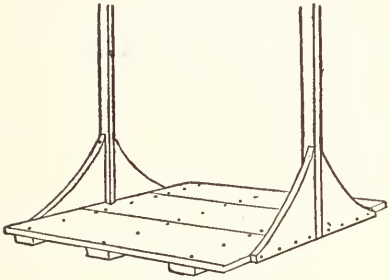


Fig. 28.

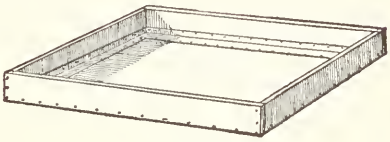


Fig. 29.

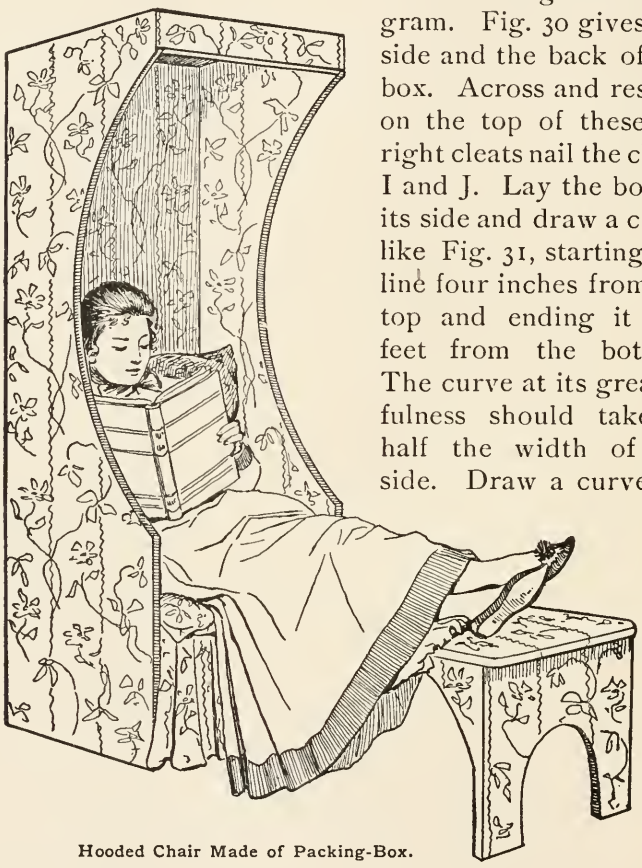
piece a small hanging basket may be hung, adding its beauty and sweetness to the rest.

The illustration will give an idea of the appearance of the flower-stand, though much of the beautiful, luxuriant growth of plant and vine had to be omitted in the drawing so that the construction of the stand might be distinctly shown.

A Hooded Chair Made of a Packing-box

You must select with care the box for this rather unique piece of furniture, for you will want it to be durable. If you prefer you may make it altogether of new material after the same pattern, but a box for the foundation will simplify the work. When standing on end your box should measure about five feet six inches in height, eighteen inches in depth, and twenty inches in width. Nail two cleats, each thirteen inches long, in an upright position on each side

and at the back of the box, as shown by the letters E, F, G, H in Fig. 30, placing the front ones, E, one inch back from the edge as in diagram. Fig. 30 gives one side and the back of the box. Across and resting on the top of these upright cleats nail the cleats I and J. Lay the box on its side and draw a curve like Fig. 31, starting the line four inches from the top and ending it two feet from the bottom. The curve at its greatest fulness should take in half the width of the side. Draw a curve ex-



Hooded Chair Made of Packing-Box.

actly like the first on the other side of the box; saw carefully along the lines, following them as closely as possible, and then take off the remaining rough edges with a chisel.

Nail a strip of wood four inches wide across the front at the top to finish the hood, Fig. 32. Box in the lower front up to the top of the cleats and there make a seat to fit in the chair and rest on the cleats, Fig. 32. You will notice that in the seat, near the forward corners, are two holes; these are for the adjustment of the rest, which gives additional comfort to the chair, and upon which one may stretch one's self out luxuriantly. Two boards, three feet four inches long,

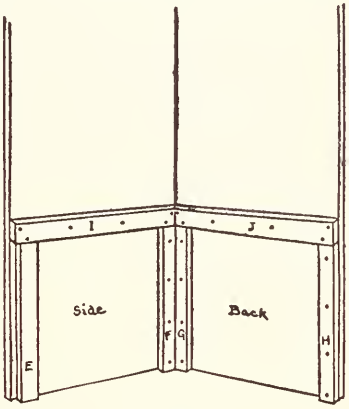


Fig. 30.

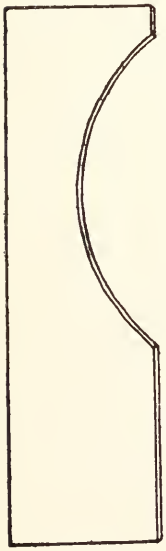


Fig. 31.

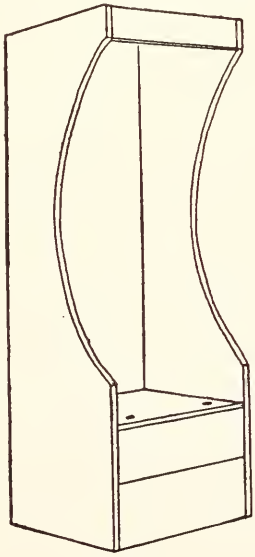


Fig. 32.

will be required for the rest, which should be just wide enough to fit easily inside the chair, resting on the seat. Cleat the rest at each end and in the middle, as in Fig. 33, putting the end cleats on the edges of the boards and the middle one underneath. Round the corners and smooth them off with knife or chisel.

Measure the distance from the top of

the seat to the floor and make the end-piece (Fig. 34) for the foot of the rest exactly that height, for the foot must be on a level with the other end when adjusted. Screw the end-piece to the rest with screws passing through the top of the boards into the top edge of the end-piece, and put braces at the corners to keep it secure, Fig. 35. Bore holes three-quarters of an inch in diameter at the upper corners of the rest, making them one inch from the cleat and two inches from the side edges of the boards, Fig. 33. Place this end of the rest on the seat of the chair, allowing it to lap about four inches, and through the holes just made mark corresponding places for the holes in the seat. Make or buy wooden pegs like Fig. 36, and slip them through the holes in rest and seat when you wish to adjust the rest. The ordinary wooden easel peg is about what you want for this purpose.

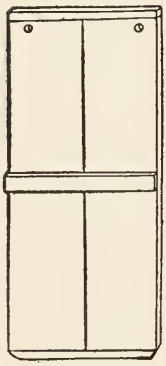


Fig. 33.

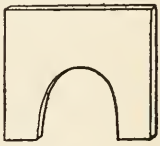


Fig. 34.

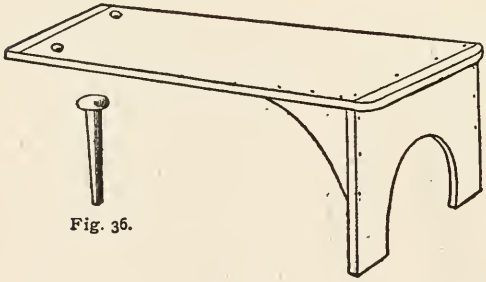


Fig. 36.

Fig. 35.

Pad the sides and back of the chair with cotton batting, using only enough tacks to hold it in place, then cover the chair inside and out, except the seat, with pretty cretonne, making a box-plaited ruffle

for the front, as shown in the illustration. Pad the top of the rest up nearly to the holes in the end, and cover it with the cretonne. Use an old feather pillow for the seat cushion, and another (smaller) for an extra one at the back, and cover them also with cretonne.

CHAPTER II

POSSIBILITIES OF AN EASTER EGG

THROUGHOUT the entire United States Easter eggs are very popular, and the practice of coloring them is increasing rather than diminishing. The stores are full of all sorts of novelties in real or simulated eggs; some valued at very large sums have been manufactured in London, but Uncle Sam does not raise such costly varieties. The real fun is in coloring one's own eggs, and if the eggs can be transformed into something else, the sport will be doubled. To turn an egg into

A Frog That Will Swim

in the water is a new idea, and one which will furnish no end of diversion. Cut stiff paper in the shape of Fig. 37. Make a small hole on one side of an egg (Fig. 38, B) and a tiny hole at one end (A), remove the contents by shaking the egg and blowing in at the end A. Then fit the shell on a stand made of a paper box with a hole cut in it just large enough to hold the egg firmly, and pour some melted wax in at the hole B, using great care to keep the egg steady, that the weight may fall exactly in the centre and make a perfect balance.

Paste paper over each hole and fit the frog (Fig. 37) on the egg, keeping the side of the egg with the covered open-

ing B for the top, forming the back of the frog. Remove the paper frog and cover the slashes cut in the back with melted sealing-wax, while hot adjust it on the egg, pressing the slashes against the shell before the wax hardens and holding them in place until they adhere. When perfectly dry paint the frog mottled green on the back and a yellowish white underneath in oil colors (Fig. 39). Try to recall the coloring of a real frog and make this one as life-like as possible. Pour water in a large basin and stir it around to produce a current. The paint having dried, place the frog on the top of the water and watch it swim. If you would like to race these queer Easter eggs, make two or three frogs and start them all swimming at the same time.

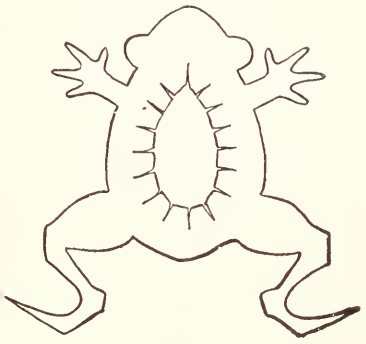


Fig. 37.

Should oil paints not be at hand, use stiff brown paper, preferably glazed, for Fig. 37. Make a hole at each end of the egg-shell and remove the contents. Drop some shot in the shell and glue paper over each opening; then fasten the paper frog, with the hole in its back (Fig. 37), securely on the egg. Wait until it is perfectly dry before placing the little animal on the water, where it will look very comical and lifelike, even though it is not green in color.

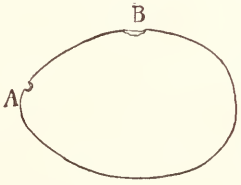


Fig. 38.

Fig. 39.

At break of day on Easter morn the sun dances for joy, says the old legend, and if you would prove it, arise early and watch the reflection of the sun as it plays hide-and-seek on the surface of the clear water which you have placed in a tin basin where it can catch the first rays from the "King of Day." A breath of air will cause the water to move, and with the motion comes the dance, as the sun sparkles and glides here and there, glittering and laughing in its joyous play. The legend is a pretty one and its meaning deeper than appears on the surface.

Beside enabling one to see the sun dance, being up early gives time, before breakfast, to help decorate the table as a pleasant surprise to the family. One of the most attractive ornaments is the white dove with its snowy wings spread wide, while it floats and sways in mid-air as if it were really flying slowly

Fig. 41.

Fig. 42.

Fig. 40.

Fig. 43.

and softly through the room. It is easily made. Take a pure white egg, and empty the contents; then cut from writing paper the wing (Fig. 40), head (Fig. 41), and tail (Fig. 42). Pin each in turn on a fresh, smooth piece of cotton wadding and cut the raw cotton out along the lines of the pattern. Make two wings of the cotton wadding,

and cut two wing-bones (Fig. 43) from stiff paper; open each cotton wing along the upper edge about a quarter of an inch in depth, according to dotted line O O (Fig. 40), insert a paper bone in each opening and gum it sparingly here and there. Smooth up the edges of the cotton wings, covering the bones entirely; then gum the wings to the

Fig. 44.

sides of the egg according to the dotted line on one end. Fasten the tail in place and, last of all, the head; open the neck a little and paste each side of the open edge on the egg. Bend the wings out, as if the bird were flying.

To float the dove in the air, make a knot in a piece of fine thread and with a needle run the thread through a small square of white court-plaster; pull the knot up tight to the plaster, unthread the needle, and with the court-

plaster over the knot, dampen it and gum the thread down tight on the back of the dove, something as a leather sucker is stuck on a brick; it will soon dry. In the morning suspend the dove over the centre of the table (Fig. 44) by tying the end of the thread on the chandelier. Let it be about ten inches above the dishes. If you can handle pen and ink very lightly, the bird's eyes and mouth may be carefully marked, although this is not absolutely necessary, as the effect is almost the same without the features being emphasized.

One of the minor sports now gladly participated in by the girls, is top-spinning, and the amount of fun they

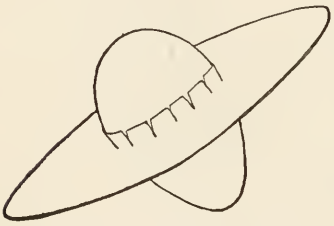


Fig. 45.

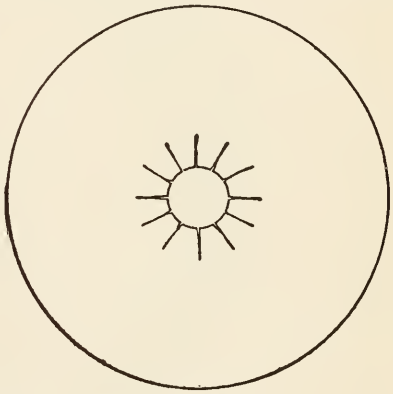


Fig. 46.

derive from the whirling playthings is only equalled by their skill in the game. All kinds of tops are welcomed and experimented with but the queerest is the

Spinning Egg

Easter top (Fig. 45) made of a hard-boiled egg colored red, with a disk of stiff red paper (Fig. 46) fitted and glued on with sealing-wax. When twirled by the fingers the toy will whiz around almost equal to a peg top. Try it, and try also

The Kaleidoscope,

for an egg-shell containing a kaleidoscope is a still greater novelty. In preparing this it is better to blow the egg first, then, by puncturing holes, as in Fig. 47, each end of the shell can be removed evenly. Care must be taken to thoroughly rinse and dry the shell, as any moisture from the egg will dim and blur the glasses, which should be kept perfectly clear. Fasten with mucilage three strips of glass, two inches long and one-half inch wide, to a piece of black paper, as in Fig. 48. The dark paper left between the light strips will allow the two end-pieces of glass to be brought together, thus forming a triangle, which is held in place by pasting the paper extending beyond the edge of the last strip of glass over on the edge of the first piece of glass. Fasten triangular pieces of glass, like Fig. 49, to the ends, in the following manner:

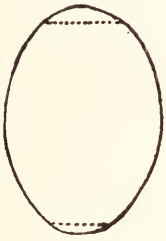


Fig. 47.

Fig. 48.

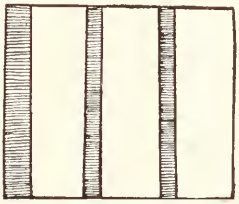


Fig. 49.

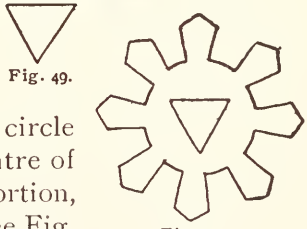
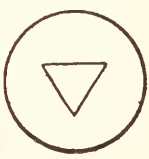


Fig. 51.

Fig. 50.



Cut from paper, not too stiff, a circle one inch in diameter, out of the centre of which cut a triangle of even proportion, just a trifle smaller than the glass, see Fig. 50. Paste the triangular glass, Fig. 49, over the triangular hole in the paper circle, Fig. 50, then fit this paper-framed glass to one end of the cylindrical triangle, and, folding the paper down smoothly, fasten with mucilage.

to hold it firmly in small pieces of differ- into the kaleido- other end in the When this part of slide it carefully over each end paste colored paper with the centre, as shown yard of colored shade as the paper, forms a loop to hang enhances its appear- connection with the frequently found in

Fig. 52.

place. Put several ently colored glass scope and close the same way as the first. the work is finished, into the shell, and a piece of bright- a triangular hole in in Fig. 51. A half- ribbon of the same tied around the egg, it up by, and also ance (Fig. 52). In egg another emblem the shops is the

Easter Hare

Why this little animal is associated with Easter eggs no one seems to be able to tell. There are several legends which explain the connection, each one different from the others. This is the prettiest:

"Scarcely had the Winter King left on his way to Northland when the young Prince, Spring, passed along, bringing with him delicate flowers and wild birds. The flowers charmed his senses with their exquisite perfume, and the birds entertained and delighted him with their sweet songs; but Spring was lonely and sighed for the children of the earth, for whom he had brought these fair gifts. Thinking, perchance, they did not know of his coming, he concluded to send them tidings, when suddenly a little hare appeared, and immediately the Prince decided that the swift-footed animal should be his messenger. The little hare, however,

begged hard to be spared, as he stood in terror of the dreadful shot-gun, which had killed so many of his brothers. But Spring, smiling said: 'You shall be the bearer of gifts to the people, then they will not harm you,' and the hare, calmed but hardly convinced, consented to do the will of the Prince.

"Then Spring wove a dainty willow-basket and filled it with pretty colored eggs, which the birds gave him, and this he handed to the hare to give to the people, with many sweet messages from Spring.

"Taking the basket in his mouth, the hare trotted off rapidly toward the nearest village. When he reached there, however, fearing the grown people, he delivered the messages to the children and gave them all the pretty eggs."

A delightful little legend, isn't it? And Spring must have been well pleased with the hare for choosing to deliver his messages to the children, for on this day it is the young people who first know of the coming of Spring.

Hares Made of Eggs

The Easter hares shown in Fig. 53 are made of eggs. Goose eggs are the best to use—they are so much larger than hen's eggs.

Blow the egg if you desire to keep the little hare; if you wish later to eat it, boil the egg hard.

Take two little tufts of cotton, roll and pinch them in shape for the ears, then two more tufts for the forefeet; fasten ears and feet to the shell with gum arabic, in the position shown in Fig. 53. Remember, the small end of the egg is the hare's head; on this end, below the ears, draw with pen and ink the eyes, nose and mouth, using Fig. 53 as a guide.

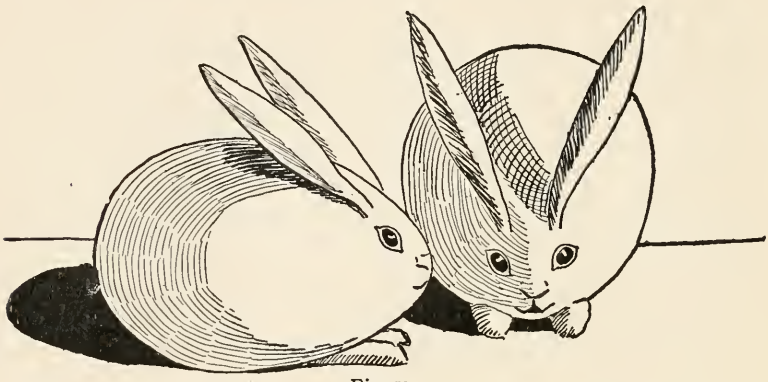


Fig. 53.

If you make two hares, place them together on a fresh, green leaf of lettuce, and they will look very natural.

Did Palmer Cox have in mind an egg when he drew the picture of one of his famous Brownies? This queer little character certainly suggested one so forcibly that it was impossible to resist trying the experiment of making his likeness from an egg, and

The Brownie

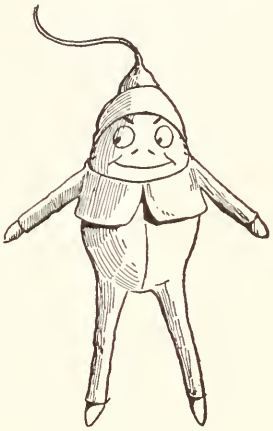
shows the result, see illustration.

Fig. 54.

Prepare the shell of a goose egg as for the Easter hare, and follow the directions given for blowing the egg. Fig. 54 is the Brownie's face. Trace this on tracing-paper, turn the other side and rub a soft lead-pencil all over the back until that side of the paper is covered with lead, taking care not to tear it in doing so. Place the face on the shell, the printed side out, and holding it steady, go over

the lines with a pencil. This will reproduce the face on the shell, then with pen and black ink strengthen the drawing. The small end of the shell is the head and the face must be drawn well up on it.

Make the Brownie's costume, cap and all, of brown material. An old brown stocking will be just the thing to use. Fig. 55 is the pattern of the cap; the dotted lines on the edges show where the seam is to be taken, and the dotted line running from side to side shows where the cap is to be turned up. Fig. 56 is the back and Fig. 57 half of the front of the jacket. Fig. 58 is the pattern of half of the trousers, which are made in two pieces cut exactly alike.



The Brownie.

Make two little rolls of unbleached cotton, two inches long, for the arms. Fig. 59 shows how the muslin is turned up on one edge and then rolled. Fig. 60 gives the roll stitched and complete. When the jacket is made, slip the arms into sleeves and fasten at top of sleeve. Make the legs just as you did the arms, but use black cloth for them instead of white. Finish the trousers and sew in the legs at the dotted lines.

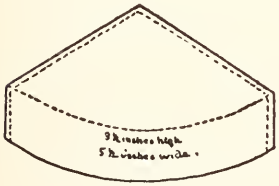


Fig. 55.

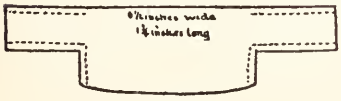


Fig. 56.

When the costume is complete cut a disk of soft muslin like Fig. 61, and slip through it, at the centre, a needle threaded with strong linen thread. A long darning needle will be the best. Pass the needle

through the hole in the large end of the shell and up through the hole at the top. Draw the disk of muslin down

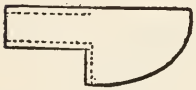


Fig. 57.

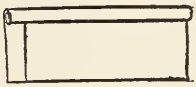


Fig. 59.

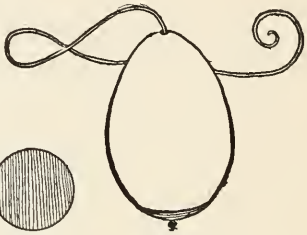


Fig. 62.

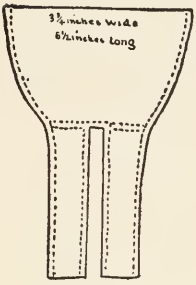


Fig. 58.

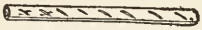


Fig. 60.

Fig. 61.

to the large knot in the end of the thread, then bring it up close to the egg as in Fig. 62 and paste the muslin on the shell.

Dress the Brownie in his clothes; first his trousers, then his jacket; fasten them here and there with glue; run the needle which you have passed through the shell up through the little cap and out at its point on top. Slide the cap down on his head and glue in place.

Let the thread be long enough to hold while you dance the Brownie on the floor.

Eggs can also be turned into

Fruits, Vegetables, Opera Glasses, and Dishes

How would you like great, luscious purple plums, watermelons and fine radishes for breakfast? We can manage to have them, and at the same time may be served mammoth acorns—not the kind gathered for cups and saucers, but quite different. These are as large as eggs and either all brown or green in color. They taste something like hard-boiled

eggs, and, what is more strange, the plums, watermelons and radishes all have a similar flavor. To prepare them, color some eggs, make the eggs all of solid hues,—a few rich purple, several red, others brown or light green, one or two dark green. When the eggs are boiled hard and of the desired shade change them into the vegetables and fruits. Begin by making

The Radish

Gum a number of crisp tissue-paper leaves cut from Fig. 63 on the big end of the red eggs. Fold each leaf

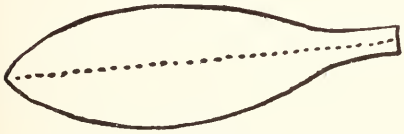


Fig. 63.

Fig. 64.

Fig. 65.

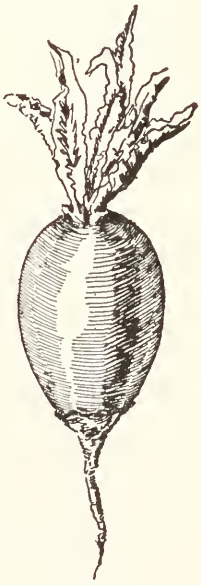


Fig. 66.

lengthwise through the centre, according to the dotted line (Fig. 63); then slip a hatpin or the back of the blade of a table-knife tight up in the fold and, holding the leaf in place with the right hand, gradually push it up together on the blade with the left hand; this gives the leaf a natural crimped appearance (Fig. 64). Take a small piece of raw cotton and dip it in the dye, or, better still, color it with a little crushed red crayon; then pull the

cotton into the form of Fig. 65. Fasten this red point on the small end of the egg and the egg will be a radish (Fig. 66). Use a dark green egg to make the baby

Fig. 67.

Watemelon

Mark uneven, lengthwise bands around it with a soft lead-pencil and fasten in the stem with sealing-wax. Bore a hole in the large end of the melon, making the opening big enough to admit the end of a small curved twig which must form the stem; put on enough sealing-wax to secure firmness (Fig. 67). Convert the purple egg into

Fig. 68.

A Plum

by fastening it on a natural twig in the same way you stuck the melon on its stem. Gum two green tissue-paper leaves to the branch for foliage (Fig. 68). The funny big

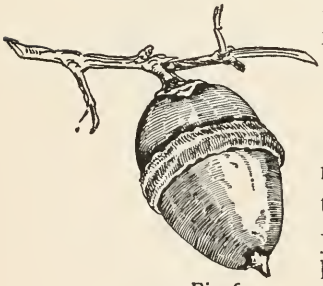


Fig. 69.

Acorn

must likewise be attached to a stem, and on its small end you should fasten with sealing-wax a leaf bud from a lilac bush; if that cannot be obtained, make the little point of cotton. Let a band of colored raw cotton or crumpled tissue-paper be glued on to form the edge of the acorn cup

(Fig. 69). When the fruit is ready for the table, serve each piece on a separate small plate in which has first been laid a white doily or a home-made mat cut from white paper.

Fresh flowers always give an added charm to the breakfast table, and in

A Dainty Vase

their value is doubled. Select three large-sized eggs, bore holes in the small ends of each, and carefully make the openings large enough to admit the points of a pair of small, sharp scissors. With these cut the holes to a diameter of nearly one inch, remove the contents of each and place the shells close together, as in Fig. 70. Notice where the sides touch and drop hot sealing-wax there to fasten the three shells together.

Fig. 70.

Flower vases are collected by people whose aim is to obtain as odd and as many vases as possible. Other collectors delight in teapots, and you will find on their shelves all sorts of queer and antique affairs. If you happen to have a friend with such a hobby, give her

Fig. 71.

A Unique Little Teapot

to add to her collection—one from which the tea can actually be poured out of the saucy, wee spout (Fig. 71). Remember, however, the fragile little affair cannot be placed on the hot stove. Blow the contents from an egg and, if desired, color

it. Have the sealing-wax of a broken color, if it is obtainable, such as soft gray, delicate brown or quiet gray-green. The work will appear better than when more positive colors are used. With sharp scissors carefully cut a round hole in each end of the shell and another small one in the side, a short distance from the top, as an opening for the spout. Soaking the shell in warm water for nearly half an hour will render it less brittle. Make the bottom of the teapot of a round piece of stiff paper; cover the upper side of the paper all over with melted sealing-wax, and before the wax hardens set the shell down on it. For greater security drop melted sealing-wax entirely around the bottom where it joins the shell. Let the wax splash up on the egg; it gives a decorative effect. The spout (Fig. 72) should be cut from stiff paper, also the handle (Fig. 73); fasten both on the egg-shell with sealing-wax in their respective positions, following the dotted lines. When finished test the teapot to make sure it is water-proof; then fill it more than half full with water and have the fun of pouring the water in a tiny stream out of the spout. If the teapot leaks the least bit, fill the crack with sealing-wax. Be sure that the little gift is in perfect order before it leaves your hands.

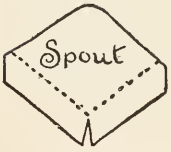


Fig. 72.

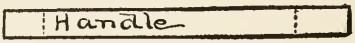


Fig. 73.

Fig. 74.

Having completed the teapot, it will be easy work to make

The Sugar Bowl

Use two strips of paper for the handles; fasten them on with sealing-wax, and set the round bottom of the half egg-shell in the soft sealing-wax which you have dropped on a circular bit of paper. The paper being flat will give the sugar bowl a level stand, enabling it to remain erect and firm (Fig. 74).

In old-fashioned Southern country-houses there is usually a pail of clear, cold spring water conveniently near, with a gourd dipper from which to drink in place of a common glass. The gourds are interesting, odd-looking drinking vessels, but cannot compare in quaintness with the little

Egg Dippers

fashioned from egg-shells. A large half of an egg-shell forms the bowl and a slender stick the handle (Fig. 75). Bore a hole in one side of the dipper and slide the end of any kind of a slender stick through. Fasten this securely in place with hot sealing-wax both outside and inside at the juncture of the bowl and handle, and in less time than it takes to tell it the dipper will be made. Place all the Easter gifts you have manufactured on a table where you may enjoy them, and in order that you shall get the full benefit of their beauty, look at them through a pair of opera-glasses; but first you must make the

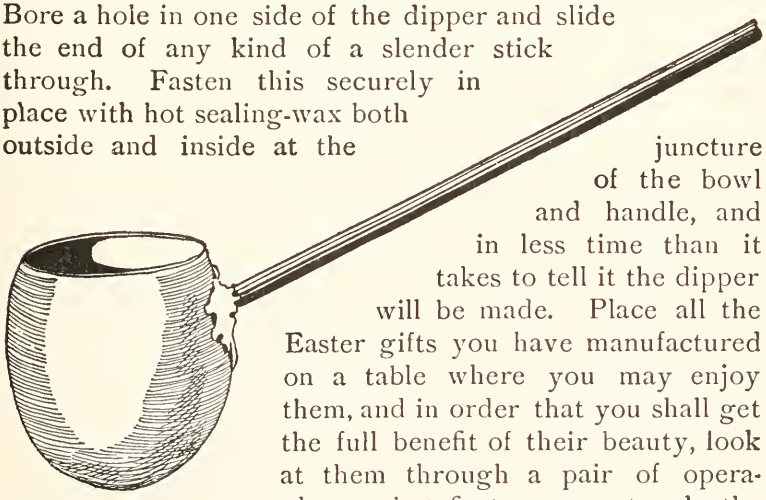


Fig. 75.

glasses. Cut Fig. 76 from card-board; then bore holes in each end of two eggs, remove the contents and cut the

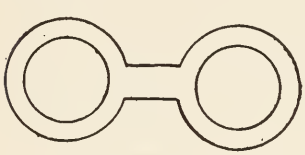


Fig. 76.

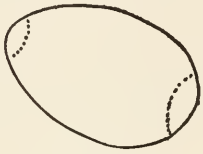


Fig. 77.

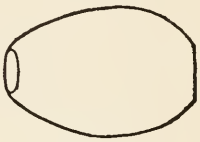


Fig. 78.

openings large enough to see through (Fig. 77). The egg after the holes are made is shown in Fig. 78. Attach the

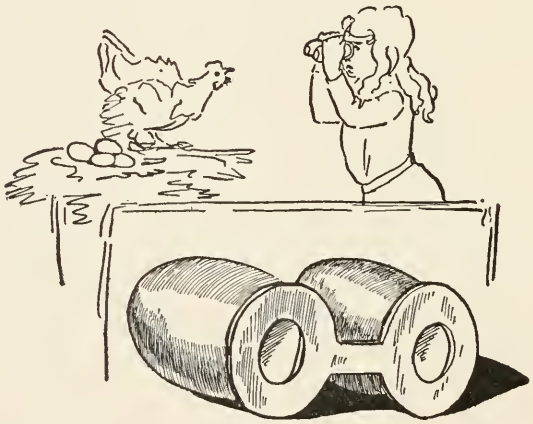


Fig. 79.

large ends of the shells to Fig. 76 by means of melted sealing-wax; glue them on tightly, and the opera-glasses will be ready for use (Fig. 79).

Paper Butterflies that Fly, and Egg Frogs that Swim.

CHAPTER III

A PAPER EASTER

EVEN play eggs manufactured of paper have many possibilities. Of course, all girls would rather make these for themselves than to buy them, be the trifles ever so beautiful; for, after all, the purchased eggs can only be looked at and then put away. You cannot have any real sport with them; cannot take them apart and put them together again any more than "all the king's horses and all the king's men" could restore "Humpty Dumpty" after his fall; nor can you change these designs from one thing to another, each complete in itself. Only the home-made Easter egg admits of such manipulation. It is an Enchanted Egg and from it can be made

An Ostrich, Rabbit, Penguin, and Rooster

To make the egg, cut from medium-weight water-color paper two egg-shaped designs, Fig. 80; in one of these cut two slits exactly like Fig. 81; lay this over the second paper egg, being very careful to have the two perfectly fitted, and with a pin-prick mark the ends of the slits of the top egg into the under one; stick the pin entirely through, first at one end and then at the other of each slit; remove the top egg and draw a straight line from pin-point to pin-point of the upper and then of the lower slit; these lines

are guides and render it easy to cut the slits to correspond with those in the first egg. The two eggs must be exactly alike, as they are in reality the two sides of one egg. Trace the markings of Fig. 82 on one egg and spread strong paste

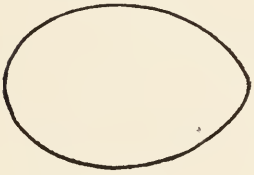


Fig. 80.

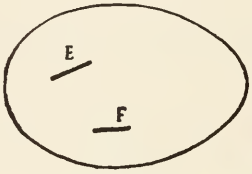


Fig. 81.

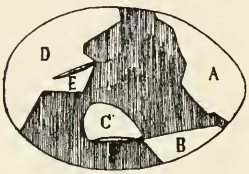


Fig. 82.

sparingly over the darkened portion, not allowing it to extend in the least across the boundary lines, for the white spaces must be left free, that they may form openings or pockets. Again fit the two sides together (the paste will cause them to adhere), and place the egg under a few books, or some other weight, to dry, and in a little while it will be ready for transformation.

Changing an Egg Into a Rooster

Trace the rooster's head (Fig. 83), his tail (Fig. 84), his wings (Fig. 85), and his foot (Fig. 86), on the water-color paper. Make two feet and two wings; either paint the natural markings or indicate them with ink on the different parts, then slide the head in the large end of the egg at D, Fig. 82, fitting it in between the two sides according to the line drawn above

Fig. 83.

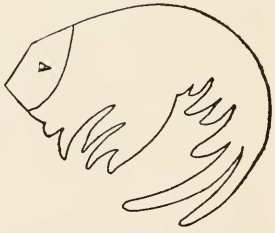


Fig. 84.

Fig. 85.

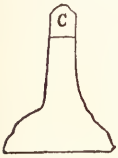


Fig. 86.

the letter D on neck of rooster. In the same way place the tail in the egg at the small end, A, Fig. 82; fit the wings in, one on each side, at the slit E; notice that each wing is cut on both sides of the extension E, to bring the top edges of the wings up higher, when they are in position, than their central top portions. Slide the feet in the slit F, one on each side, slightly bending them out from each other; the rooster (Fig. 87) will then stand alone when it is placed on a level surface.

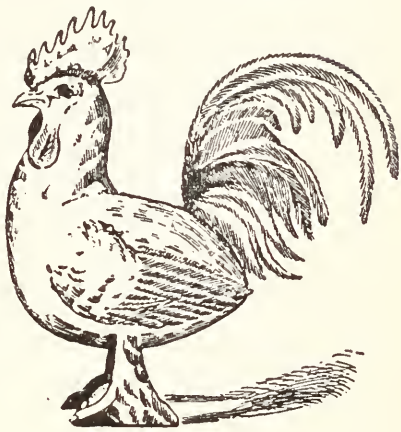


Fig. 87.

A Rabbit from the Egg

After the rooster has served its day remove the different parts and leave the egg as it was at first. We are now ready to construct a rabbit. Make the head (Fig. 88), the tail (Fig. 89), one fore foot (Fig. 90), and two hind legs (Fig. 91), of the same water-color paper. Carefully slip the head in the small end of the egg, Fig. 82, A, and place the tail down low in the large end of D; the piece which represents the fore feet—it should be painted to look like two, one slightly back of the other—is

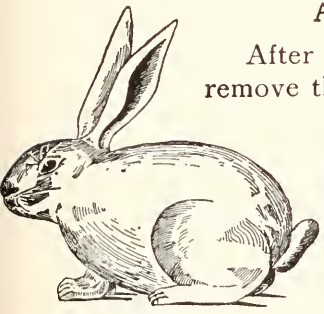


Fig. 92.

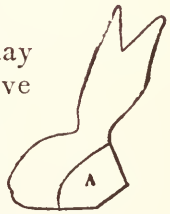


Fig. 88.

Fig. 89.

Fig. 90.

Fig. 91.

placed at the opening B, and the hind legs are fastened on each side of the egg in the upper slits E. Bend the hind legs out a trifle and stand the little rabbit on its feet (Fig. 92). If you wish you can copy the markings on this one and make your rabbit look as natural as possible, All the animals that you make should be white, except the penguin, as the white egg forms the body of each one.

The Egg Develops Into an Ostrich

In order to hatch the ostrich change the rabbit back again to an egg. Cut from light-weight card-board the head (Fig. 93), and the two legs (Figs. 94 and 95); these must be stiff and strong: you will notice that the legs are not bent alike. Use water-color paper for the two wings (Fig. 96) and a tail (Fig. 97). The wings and tail should look as much like ostrich-plumes as you are able to make them. Slide the extension of the neck, Fig. 93, D, into the upper part of the large end of the egg, D, Fig. 82, and the extension of the tail into the small end, A, fitting it in according to the line on the tail drawn

Fig. 98.

Fig. 93.

Fig. 96.

Fig. 97.

Fig. 94.

Fig. 95.

around A; slip a wing into each side of the egg at the slits E, and finally fasten the legs, one on each side, in the slits F. Slightly bend the legs outward and adjust them so they will balance the body perfectly; the ostrich is now able to stand alone and will even appear to be walking (Fig. 98).

To Hatch a Penguin from the Egg

Make the head like Fig. 99. A is the portion which must be placed in the small end of the egg, A, Fig. 82, allowing the lower curve of the head, K, to extend down over the egg. Cut from very stiff writing-paper a like curve, and paste it in position on the other side of the head, where it should hang free: only the top edge of the piece being fastened on the head in order that the curve may easily slip down over the other side of the egg. This will make both sides of the bird appear alike. Fold a piece of writing-paper, and from it cut Fig. 100; the straight fold extends from O to U. Carefully fasten together the open edges of the back from T to O and from U to P; gluing them on the extreme edges, that the pocket thus formed may be as large as possible. Take stiff paper for Figs. 101 and 102, which are the feet and tail of the bird, the extension X of Fig. 102 forming the tail. Leave the eyes and mouth white, and paint the remainder of the head black; also blacken the wings and back, Fig. 100, and the feet and tail. Place the head in the small end of the egg, A, with the curves K down over the white egg on each side; then put on the

Fig. 99.

Fig. 100.

Fig. 101.

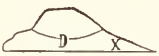


Fig. 102.

Fig. 103.

little fellow's overcoat, or back, Fig. 100, fitting it over the sides, F, Fig. 81, of the egg; push the egg or body of the penguin in the pocket formed in the back of the overcoat, and shove the feet into the large end of the egg, D, Fig. 82. Hold the lower edges of the egg firmly together while you bend out the feet sufficiently to enable the penguin to stand alone, Fig. 103.

These little creatures should be made so carefully that either side will be presentable. It is always distressing to know that "the other side" does not look real, and it is a great satisfaction to be able to show both sides of our work to our friends and know there is no "wrong side" in what we do. If you can manage to paint the designs in water-colors they will look best, but even when marked with black ink the little animals are charming; no adequate idea can be gained of this fascinating Easter egg until all the different parts have been made and the egg changed from one to another of the various life-like little creatures. The egg has been so planned that the wings come down and cover the tops of the legs of both rooster and ostrich; the penguin and rabbit need no such cover, as the rabbit's legs fit in naturally, and those of the penguin merely slide up in the egg. A little practice will enable you to perform the work skilfully.

Butterflies are also emblems used for Easter. The beautiful fairy-like creature changing in its close, gloomy chrysalis from an insignificant little worm to the radiant winged creature of the air, fitly typifies the Resurrection. Did you ever find a chrysalis and after examining it lay it carefully aside, to await the development of the life within, and some bright morning discover the shell broken and empty, while in the room fluttered a brightly colored butterfly? If so, you will enjoy all the more

The Butterfly That Will Fly

and which we will manufacture of tissue-paper.

Take four pieces of tissue-paper—yellow, red, blue, and white—and cut each according to Fig. 104. The shape is not exactly that of a real butterfly, but when made of paper it proves more satisfactory, because such butterflies fly far better when cut in this way. Fasten a fine black thread through the back of each butterfly (Fig. 105); bend the wings up a little and tie, or fasten with bits of court-plaster, the loose ends of the threads on a round stick, placing them at a distance of about four inches apart. Let the threads vary in length from six to thirteen inches; this will bring the butterflies at different distances from the stick. When all is ready stand about forty-five inches from and in direct line with a register built in the side wall next to the floor; hold the stick, with the butterflies attached, up and out horizontally fifty or more inches from the floor. The gentle heat will cause the brilliant little things to flutter up and down, this way and that, in a most natural manner; the fine black threads being practically invisible, the butterflies appear as if floating in the air without aid from any source.

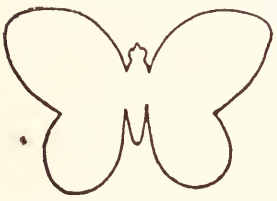


Fig. 104.

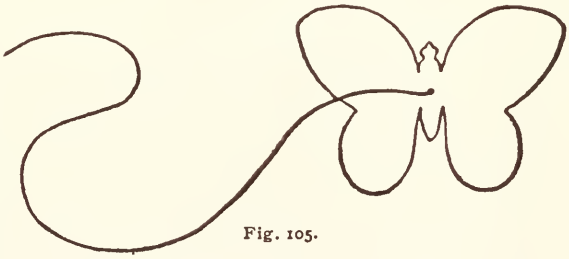


Fig. 105.

You might try the experiment of taking them out-of-doors; if the breeze is not too strong, the butterflies will behave in the most approved manner, which you know all about, having so often watched the graceful movements of the beautiful live insects during the long summer days.

Perhaps the most charming of all Easter offerings is

The Easter Lily

Everyone strives to have a lily on Easter day. If you are unable to obtain one of the beautiful, fresh flowers, do the next best thing; make a lily—a stately, graceful white blossom on a long, dark-green stalk. The flower is lovely even when manufactured of tissue-paper, and can be made to look so natural that one almost expects to find the sweet, delicate perfume of the real blossom. The paper plant has one advantage at least over the natural one: it lasts much longer and needs no care to keep it fresh. From a new, smooth sheet of white tissue-paper cut six petals (Fig. 106); fold each lengthwise through its centre and bend or curl the top into a slight curve to take away the stiffness (Fig. 107); then cut Fig. 108 of unruled white writing-paper. Paint both sides of the stigma or top a greenish yellow and the style or stem-like portion a pale Nile-green. Bend the style up flat against the scalloped stigma according to the dotted line in Fig. 108. Allow an eighth of an inch and

Fig. 106.

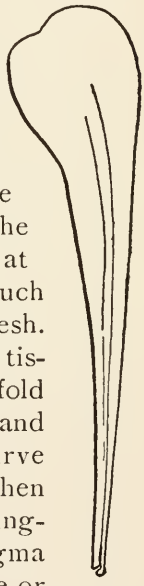


Fig. 107.

bend the style back again, which will make a little tuck in the style, bringing it exactly in the centre of the scalloped stigma when it is straightened out (Fig. 109). Fold each of the three scallops of the stigma through its centre and bend them down (Fig. 109); this finishes the pistil.

Fig. 108.

Fig. 109.

Make six stamens according to the pattern (Fig. 110); paint the anthers or tops orange color on both sides, and the supports or stems a very light green —as you remember those in the natural flower. Bend the supports in the same way as you did the style of the pistil, and slightly curve the orange-colored anthers. These should seemingly balance directly on the tip-top of the supports (Fig. 111). With strong paste fasten the stamens on the end of a stick which has previously been covered with dark olive-green tissue-paper (Fig. 112); then paste on three of the white petals (Fig. 113). Use paste sparingly, and be careful to arrange the petals evenly before adding the remaining three (Fig. 114), which should be placed one over each space between the first three petals. Fig. 115 will make the idea plainer. The petals numbered 1, 2, 3 represent the first three; the other three alternate with these, coming back of and between them as in the corolla (Fig. 115). Should the last petals incline to droop, attach them to the inner ones about midway up with a very little paste.

Fig. 110.

Fig. 111.

Fig. 112.

Take a strip of olive-green paper and cut it according to

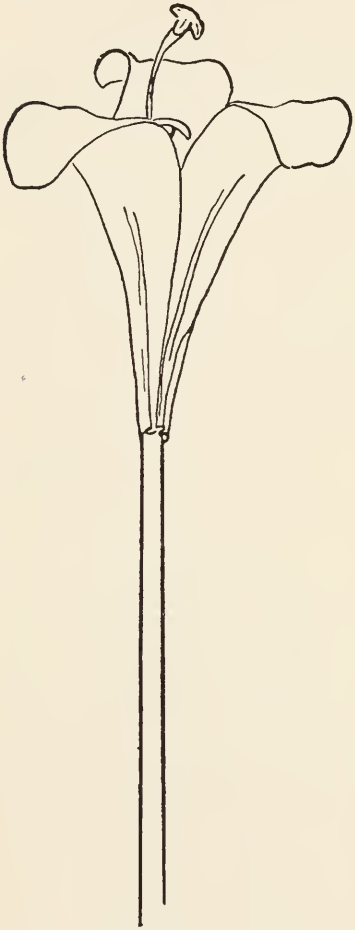


Fig. 113.

Fig. 114.

the dotted lines in Fig. 116; slightly curve each leaf in the hollow of your hand by rolling the round head of a hat-pin down its centre; when finished wind the strips of foliage

around the lily stalk (Fig. 114). Have the stalk quite long, a short one does not look well. If you desire buds as well as blossoms, cut squares of white tissue-paper (Fig. 117); roll each paper (Fig. 118), fold down the top ends a trifle and pinch up both ends; then pull the bud into proper shape (Fig. 119). Paste the pinched tops together and fasten the lower end of the bud on a green-covered wire (Fig. 120).

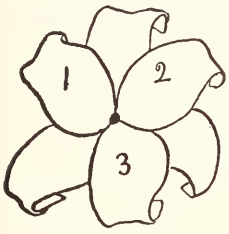


Fig. 115.

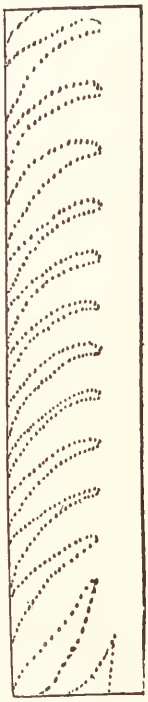


Fig. 116.

You can make smaller buds for the top and have the larger, which represent buds ready to open and blossom, bent as in Fig. 120. To make a stalk bearing buds and several blossoms, instead of building the flowers on the end of a stick, fasten each blossom and each bud on a separate wire which has first been covered with green tissue-paper; then bind the small buds on the top of the long green stalk with thread or fine wire. Next fasten on the larger buds, afterwards the blossoms, and when all are arranged satisfactorily wind the green foliage around the stalk (Fig. 114), and it will

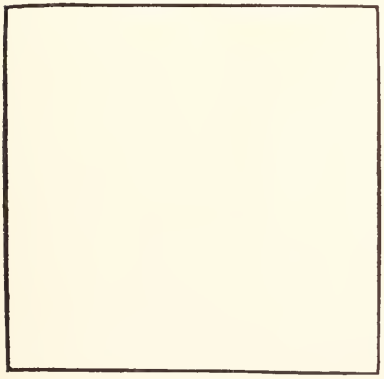


Fig. 117.

all look very beautiful and natural. The lilies may be placed in a tall glass vase or the end of the stalk pushed

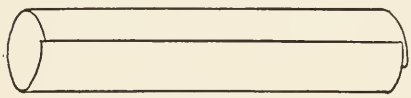


Fig. 118.

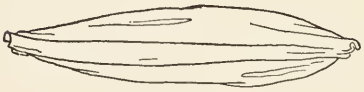


Fig. 119.

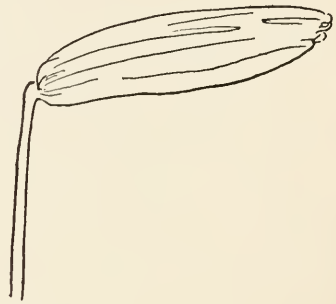


Fig. 120.

into the earth in a real flower-pot, and at a short distance it will have the appearance of a growing plant.

CHAPTER IV

VACATION WORK WITH NATURE'S MATERIAL

HERE is a piece of advice for you, girls; possibly it may not be appreciated, but it is good advice, nevertheless: While you are away for your summer holidays, keep out of sight the fancy work you do at home.

When we drop the work or study that has employed us during the long winter and spring months and go off in the summer to be refreshed and invigorated, do we not say we go for recreation? If you will stop to think about it you will see that recreation means literally re-creating, being created anew; it means the laying aside of our ordinary habits and thoughts and adopting entire new ones, for the time being at least. It is this refreshing change of thought and occupation as well as change of air that proves so beneficial; therefore, don't keep the one little portion of your brain which you devote to fancy work busy all summer long in the old routine, but let it have recreation as well as the rest of your mind and body.

By this I do not mean that the faculty ordinarily exercised in the interest of fancy work should not be used in any way, or that the hands which take so kindly to needle and thread should be always idle. Not at all; but

there are other forms of work for quiet hours, distinctively summer work, which with their entire or comparative novelty refresh the mind and give added deftness to the hands.

The rainy day comes occasionally and you cannot be out of doors; then is the time to look over the store of treasures which you have gathered in your walks through wood and field and try to devise some means of preserving them or making them of use. To begin with, there are your pine cones, and no doubt you have gathered a great number of them; everyone does. Sort the cones and select several of the largest, most open ones to use as hanging-baskets in your window next winter, and if you have an open fire devote the remaining cones to creating a cheery blaze, to help disperse the gloom that a northeast storm in summer is apt to throw over one.

Cone Hanging-basket.

If you are impatient to try the experiment of making a

Cone Hanging-basket,

you need not wait until winter, for, being in the country, your materials are all close at hand, and there is no reason why you should not start one immediately. Having selected your cone, shake out the seeds, if any remain in it, and tie a cord around at about the middle, leaving a loop on the top by which to hang it, as in the illustration. Fill the interstices with lightly sifted earth, scatter a handful of wheat or oats over it, and thoroughly dampen the

whole. Hang the cone in your window, keep it damp, and shortly the grain will sprout and the cone will become a mass of vivid green.

Of course the beauty of the cone hanging-basket does not last a great while, but a new one can be so quickly and easily prepared that, with a store of half a dozen cones, you may have one fresh and green in your window all winter. Almost any kind of small cereal will sprout if treated in this way, and each time you can plant different seeds.

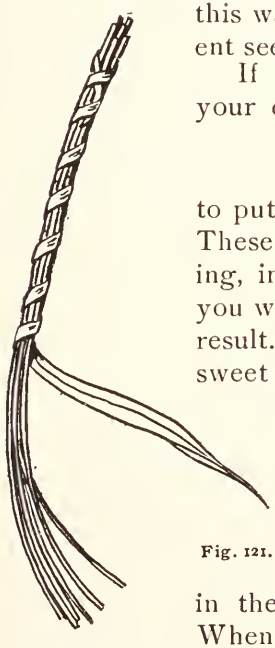


Fig. 121.

If you happen to have sweet grass in your collection, make it into

Sweet-grass Mats

to put in the linen closet or bureau-drawers. These mats, placed between sheets or clothing, impart such a sweet, country perfume you will be surprised and delighted with the result. Take seven or eight stalks of the sweet grass, cut off the flower-heads, bunch the stalks together, and with a long, strong blade of the grass, wrap tightly into a rope, as in Fig. 121. Make several of these ropes before beginning your mat. Then coil one in an oblong, and sew it together, as shown in the diagram, Fig. 122. When the first rope is nearly used up, wrap the free end securely to the end of another rope and continue to coil as before. When finished, the longest diameter of the mat should measure about seven inches. You will notice in

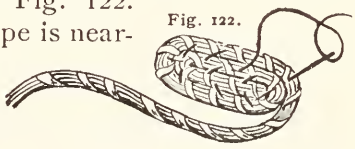


Fig. 122.

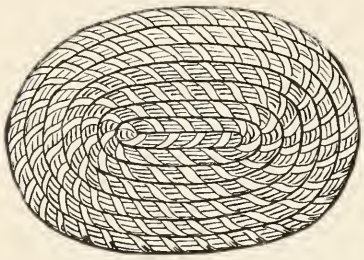


Fig. 123.

Fig. 123, which shows the sweet-grass mat completed, that the last end is tucked in neatly under the coil next to it, where it is fastened tightly with needle and thread.

With all the other treasures, I hardly think it has occurred to you to collect corn-husks, and yet many pretty things can be made of them. For instance, there is the

Corn-husk Basket,

strong, durable, and useful. For making one of these baskets select the fine, inner husks, and wrap them in a damp cloth, let them remain two hours, and then cut into strips about one inch wide. Take six of these strips and tie them together at one end with a strong thread; separate the strips into three strands, two strips to a strand, and braid as in Fig. 124. In the beginning do not choose strips all of the same length, as they will have to be pieced out to make the braid the required length, and the piecing should not be all done at the same place. When you have nearly reached the end of your shortest strip, open it out flat, lay the end of a new strip over it as in Fig. 125, and fold together as in Fig. 126. In this way the piecing goes on as the braid grows in

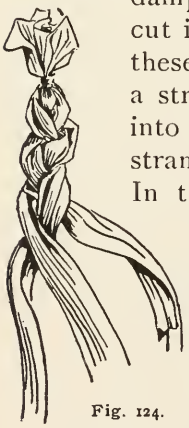


Fig. 124.

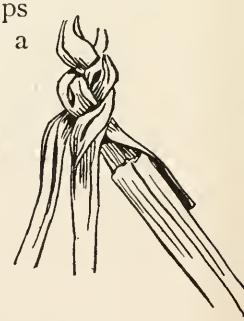


Fig. 125.

length. When you have about a yard of the braid, dampen and begin to coil it as in Fig. 127, fastening the edges together with needle and strong, waxed thread. It will require the whole yard of braid for the bottom of the basket, which should measure about five inches in diameter. Before you have coiled quite all of it, piece the strips again and make a yard or so more of braid. Dampen the new part and begin to coil once more, this time turning the braid up on its edge, and running it around horizontally to form the sides of the basket, widening the sides a little with each row. Four inches is a good depth for a basket of this kind. Finish the top of the basket by sewing another row of braid around the outer edge. For the handle make a braid twelve inches long, then divide the strands and at

Fig. 126.

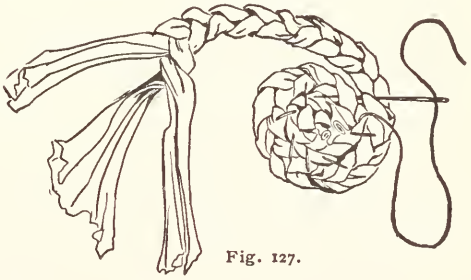


Fig. 127.

the end of the large braid make two small ones six inches long. Fasten the ends of the small braids and cut off neatly close to the wrapping. Remove the thread which holds the other end of the large braid together and separate the strips far enough up to make two small braids at that end the length of those you have just finished. Sew the handle on the outside of the basket in the position shown in the illustration, tucking the ends between the bottom and next

Corn-husk Basket.

to the bottom row of braids, and fastening them neatly on the inside.

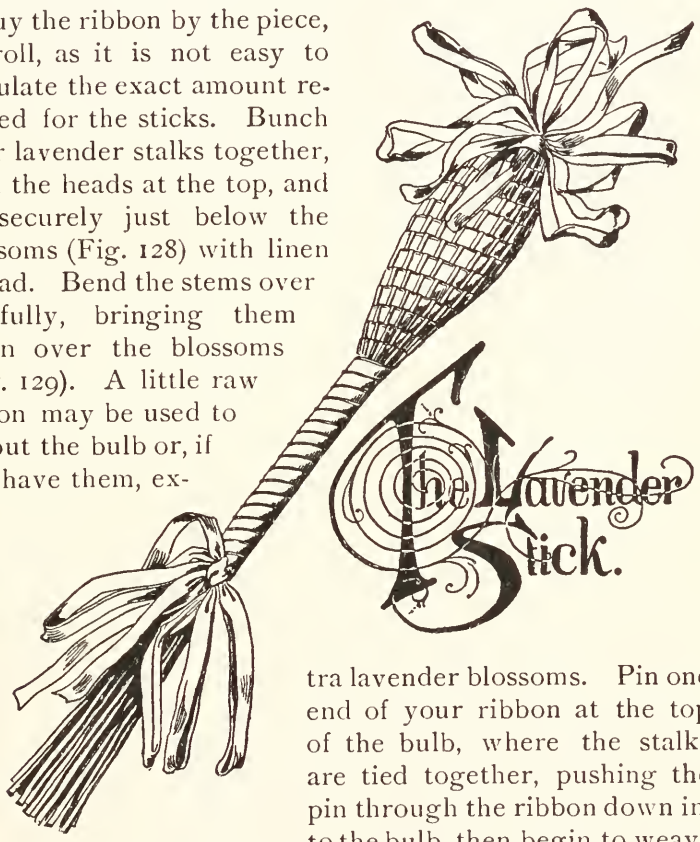
Like the sweet-grass mats the

Lavender Sticks

are for perfuming clothing and household linen. They are pretty little trifles, and make most acceptable birthday and Christmas gifts.

Gather your lavender stalks (each one having a blossomed top) while they are fresh and green, and use them as soon as possible after cutting, as they grow brittle when dry. It will take about twenty-five stalks for a large lavender

stick, less for a small one, but in both cases there must be an uneven number. You will need, also, some narrow lavender ribbon. It is best to buy the ribbon by the piece, or roll, as it is not easy to calculate the exact amount required for the sticks. Bunch your lavender stalks together, with the heads at the top, and tie securely just below the blossoms (Fig. 128) with linen thread. Bend the stems over carefully, bringing them down over the blossoms (Fig. 129). A little raw cotton may be used to fill out the bulb or, if you have them, extra lavender blossoms. Pin one end of your ribbon at the top of the bulb, where the stalks are tied together, pushing the pin through the ribbon down into the bulb, then begin to weave it under and over the stalks as in Fig. 129. Weave about two inches, widening all the time, then draw the ribbon a little tighter, bring the stalks closer together, and narrow the bulb gradually. When the stalks are bunched again,



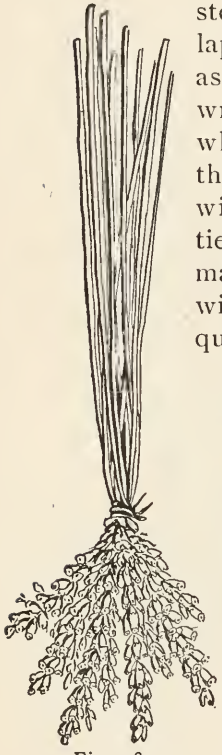


Fig. 128.

stop weaving and begin to wrap, lapping the edges of the ribbon as in the illustration. Have the wrapping tight and firm and, when about an inch or two from the ends of the stalks, fasten with needle and thread, then tie the ribbon in a bow of many loops. Finish the top with a bow also, making it quite full.

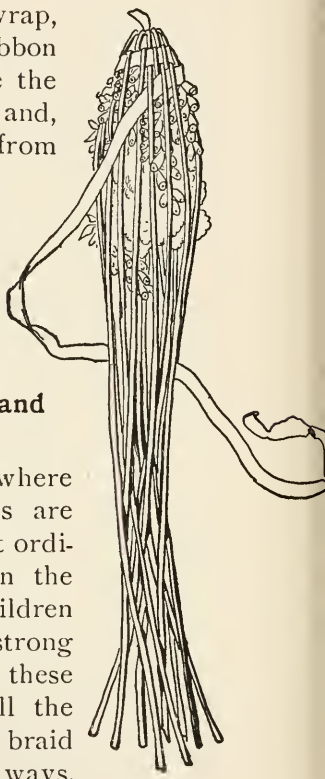


Fig. 129.

Braiding Palm, Grasses, and Corn-husks

Away down in Florida, where the palms and palmettos are as common as are the most ordinary trees and shrubs in the North, most of the children wear hats made of the strong and durable leaves of these beautiful trees; and all the children know how to braid the palm in a number of ways. Indeed, it was a little girl not more than eight years old who taught me just what I am going to try to teach you. She was "keeping house" with a number of other children on one of the fine, shady streets of Daytona, Fla., and, stopping to watch them at their play, we were made welcome in their "house," and one little hostess gave me the lesson I asked for then and there.

You all know how a palm-leaf grows, tall and straight, and closed tightly like a fan until it is time for it to open,

Fig. 130.

when it slowly separates and spreads its fingers wide. It was the unopened leaf of the cabbage-palm which was chosen for the braid, and very pretty the tender leaf is; white, soft, and pliable, and edged with light green. It is beautifully adapted to braiding, and the fingers of my little teacher flew deftly, as the braid lengthened in her hands, and my mind sped along almost as swiftly, as I tried to adapt the process to materials to be found in the North, so that Northern, as well as Southern, girls might share with me this little piece of handicraft.

I am sure wide, flat grasses can be braided in this way, and corn-husks and—well, a number of other things which

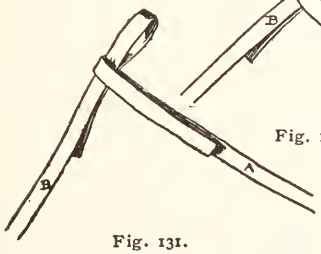


Fig. 131.

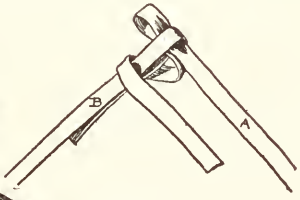


Fig. 132.

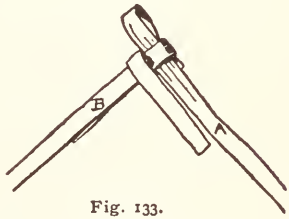


Fig. 133.

you will find if you keep your eyes open; but I must return to the palm and tell you just how I was taught to braid that.

First I tore the leaf into strips about one-quarter of an inch wide, then taking two strips, I folded one end of each as in Fig. 130, and lapped the folded ends as in Fig. 131. Bending the right-hand strip (A), I pushed it through the loop formed by the other (B) as in Fig. 132, and pulled B down tightly (Fig. 133). Bending B, I pushed that through the loop A had formed,

and drawing A tightly, left a loop of B at the top (Fig 134). Each time a loop was formed I pushed another loop through it and drew the first down snugly, and so braided a strip like Fig. 135.

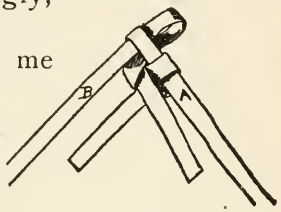


Fig. 134.

My little teacher forgot to show me how to piece the strips, and I was obliged to work out the problem for myself and for you. When one of the strips had dwindled down and grown too narrow, I cut it off, leaving a little over an inch below the loop. I then inserted another strip over B, pushing it under A, as in Fig. 136, bringing it over the B loop and again under A on the other side, pulling it down until the two short ends were even. After that I continued to braid as before, the first two B loops being double, of course.

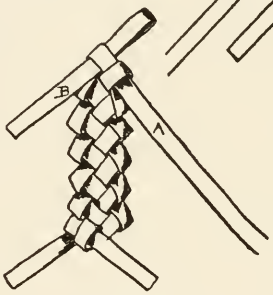


Fig. 135.

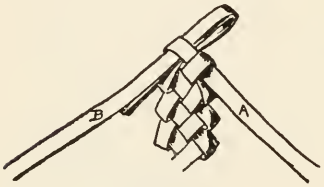


Fig. 136.

It is not well to have the piecing of both strips come together, therefore one should be longer than the other at the start, and the strips should be always of the same width in order to make the braid uniform and even.

This is regular hat braid you have learned to make, and perhaps having done so much you will feel inspired to continue the work and make a hat, if not a large one, at least one for your own or your younger sister's doll. Or you can make it into a basket by sewing the braid together, lapping one edge over the other.

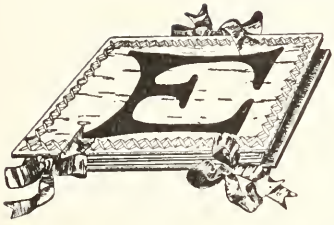
The braid should be back-stitched for both hats and baskets.

Most materials require damping before they are braided, for even when soft and pliable they are apt to separate when dry, unless they have first been soaked for a while in water.

Fig. 144.—A Girl's Collection of Pictures.

CHAPTER V

COLLECTIONS



VERY girl can have her own gallery of famous artists' pictures, and the searching for and finding of treasures to form a home art collection are a constant source of interest. When once the supply is started it grows rapidly, for the fascination increases as the work progresses, and the nucleus of a fine assortment is soon gathered. Daily papers furnish valuable material in this line through their reproductions of paintings, and the market is flooded with beautifully illustrated magazines giving the art of our own land and that of foreign countries; then there are unmounted photographs of masterpieces which may be purchased for a very small sum; many can be bought at a penny each.

If new magazines are not to be had, old ones can be found at bookstalls for low prices, which contain reproductions of paintings and excellent accounts of them. Carefully take the magazines apart, removing the wire fastenings by straightening and drawing them out before attempting to separate the leaves; then cut out the chosen pictures, allowing as wide a white margin as possible. Only those prints which represent the work of eminent artists should be selected.

Decide upon some definite line of art, for the field is a large and varied one. Better results can be obtained if you devote your efforts to the paintings of only one nation, such as American, English, French, or Flemish art. Again, the collection might embrace the works of but one artist or school of painting, or be restricted to famous caricaturists or mural decorators. Having made your choice and collected two or three designs, buy low-priced medium-weight card-board for

Mounting the Pictures

Select a kind not brittle or liable to tear; get either a soft gray tone or white, the former often harmonizing best with black and white pictures. Your material being ready, turn the pictures on the wrong side and mark the centres. The easiest way of doing this is by laying a ruler diagonally across the back of picture, Fig. 137, and drawing a line on the paper along the edge of the ruler. Be sure to have the ruler precisely at the corners; if placed either to one side or the other, the centre will not be found. Fig. 138 shows the first line drawn; cross this line by another running from the remaining two corners which will give Fig. 139; the point where the lines intersect is the exact centre of the picture. Cut the mounting board in portions large enough to allow a surrounding margin of four or five inches on each picture; then mark the centres on the right, not wrong, side of the mounting board. It will be unnecessary to extend the line from corner to corner of the mounting board; lay the ruler across and mark it merely at the centre, Fig. 140. Take the print

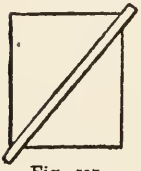


Fig. 137.

Fig. 138.

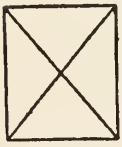


Fig. 139.

you intend to mount first and carefully place it upon the blank piece of paper so that the centre of the picture will be exactly over the centre of the blank paper; lightly mark a line in lead-pencil around two corners of the picture, remove the print and the blank paper resembles Fig. 141. The last markings are a guide in pasting the picture on the sheet of paper. First dampen the wrong side of the print with a wet sponge. Have ready some strong paste and spread it lightly on the wrong side.

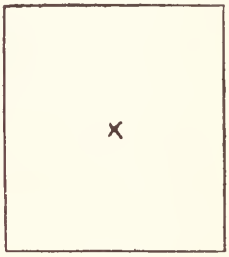


Fig. 140.

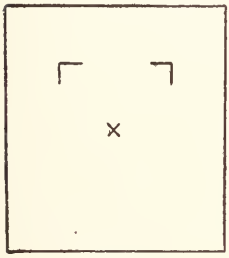


Fig. 141.

Be careful not to get too much paste lest it smear the mounting-paper. Lay the mounting-sheet upon a perfectly clean, level surface and place the print on it according to the guiding marks. Have the picture absolutely smooth, without a suspicion of a wrinkle or blister, and with a clean cloth again smooth it gently, pressing it down here and there as seems necessary to make it adhere firmly (Fig. 142). Then place a weight upon the mounted picture and leave it to dry. After having been successful with one picture no difficulty will be found in mounting the others.

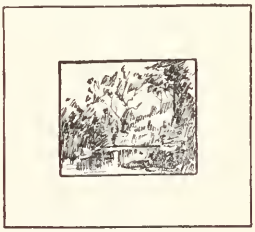


Fig. 142.

It often happens that it is impossible to separate a picture from the article treating of it, for the reason that one side of the page gives the print and the other side the description. This difficulty is remedied by

Splitting the Paper,

which will give two layers of uniform thickness, and if there are pictures on each side of the paper they may both be preserved. Cut two pieces of perfectly smooth muslin a little larger all around than the sheet of paper to be split. Dampen one of the pieces of muslin and lay it out smooth on an even, flat surface; cover one side of the paper to be split with a thin layer of very strong paste or glue and carefully place the paper, paste-side down, on the muslin; lay it out flat and be sure it does not wrinkle; then cover the other side of the paper with paste and place the second dampened piece of muslin over it. Be certain that the muslin adheres over the entire surface of both sides of the paper. Should it fail in places, the spots of paper not clinging to the muslin will tear out during the splitting. See that the paste extends to the outermost edges of the paper, and do not forget that muslin, paper, and paste must all be smooth. Use a rolling-pin to secure uniform adhesion. When the pasting is done, let it dry, and after it has dried perfectly, separate the two pieces of muslin at one corner, and the paper will begin to split if the work has been properly done. Continue opening the edges until all four sides are partially separated, and the fission of the paper just beginning; then a firm pull will entirely separate the two pieces of muslin and, at the same time, split the paper. If you experiment on a small piece of paper before attempting the picture you will better understand the process. To remove the muslin from the paper, soak it in hot water; place the water in a basin large enough to admit of the muslin lying out flat. Let the paper side be underneath, so that the muslin may be easily removed when it detaches itself from the paper. Should any bits of

paste remain on the paper, soak them off; move the paper gently in the water back and forward, until the paste is washed away; then lift the paper from the water by placing a thin stick of wood under one edge and carefully drawing the wet picture out; it will hang like a curtain from the stick. Let the water drip off; then lay the paper down flat and smooth on a piece of blotting-paper, picture-side up. When nearly dry, place the picture between two sheets of pasteboard, and leave it under a weight until quite dry. Mount split pictures on white card-board; gray will show through the thin paper. On the back of each mounting-board fasten two small brass rings by which

To Hang the Picture

Slide a ring on a short piece of tape and glue the ends of the tape at one side on the back and near the top of the picture to form a hook (Fig. 143, H). Do the same with a second ring and tape. When both tapes are securely fastened on the mounting-board, paste over each a strip of tough paper or muslin (Fig. 143, P). If a wire be fastened on the rings, the pictures may hang from the picture-moulding around the room, or the collection can depend upon nails for support. If desirable, the rings may fit over tacks driven in the wall.

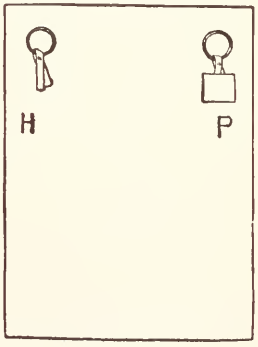


Fig. 143.

Fig. 144 at the beginning of the chapter gives a girl's collection of reproductions from famous paintings. The pictures can be kept in

A Portfolio

made expressly for the purpose, should there be no wall-space on which to hang them. Make the portfolio of two strong, stiff pieces of pasteboard, cut large enough to extend one inch beyond each of the four sides of the mounted designs so as to preclude all possibility of damage to the edges of the work. Sew a length of brown tape at each corner of the two sides of the portfolio, making in all eight pieces of tape, four on each pasteboard; then lay each cover down on a piece of denim and mark four spots on the cloth, corresponding to the places where the tapes are fastened on the pasteboard.

Remove the denim and punch holes through the cloth at the four places designated on each piece; button-hole stitch the openings, and run the tapes through, drawing the cloth down tight and flat upon the pasteboard; smooth the brown covering out evenly and turn the four sides neatly over the edges where they can be securely fastened by long stitches of strong thread taken from edge to edge of the cloth. Cover the wrong side of each piece with heavy, rough, brown paper; paste it on carefully and put them under weights to dry; the paper forms the inside and the cloth the outside of the portfolio. In such covers any number of mounted pictures can be kept secure from harm.

It is only necessary to pile them up evenly on one cover, lay the other cover on top, and tie the two together over the pictures by means of the tapes at the four corners. The portfolio is not intended to stand on edge; it must be laid flat.

Another and different collection is very precious, though the best part is not visible. It is a collection that is sure to be always a comfort, and one with which the more familiar you grow the better you will feel. Such a collection is called the

Sunshine Diary

The book may be one of the usual styles of diaries sold in the stores, or an ordinary blank-book; better still, a home-made book. The latter requires forty-six sheets of writing-paper (Fig. 145), and for a cover stiff brown paper or cardboard—the kind used for making passe-partouts and which comes in all colors—will be excellent. Cut the cover a trifle longer and broader than the writing-paper, so that it may extend beyond the leaves of the book on the sides, protecting the edges (Fig. 146). Fasten all together by means of a strong brown or yellow cord laced through holes made in the cover and book (Fig. 147). Should you be unable to cut the holes as neatly as you desire, send the book to a shoe store or a harness-maker's to have the holes made.

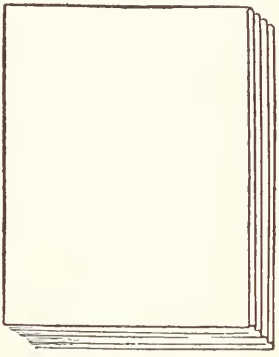


Fig. 145.

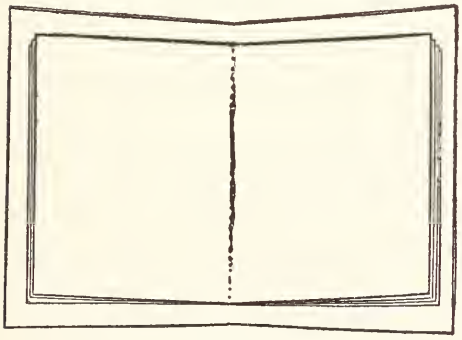


Fig. 146.

Decorate the cover in gilt. Make a circle for the sun and use a ruler in marking the rays. Draw the top and bottom rays first. Begin at the top of the centre ray and run the lead-pencil down along the edge of the ruler as far as you wish the ray to extend; then raise the pencil, but

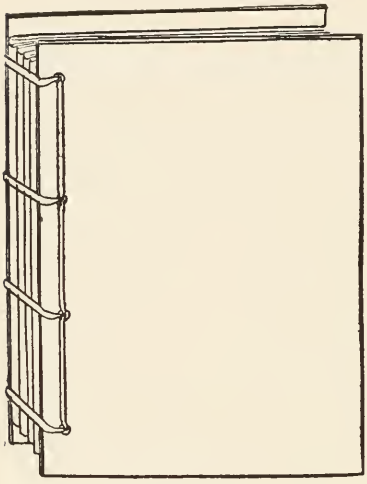


Fig. 147.

not the ruler. Hold that down firmly with the left hand, while you again place the pencil down below the circle and draw the lower ray. Make the two horizontal rays in the same way (Fig. 148). After this it will be easy to draw the remaining rays by laying the ruler diagonally between the top and bottom and the side rays. Beneath the sun mark the title in plain lettering (Fig. 149). If you cannot make the letters even and straight, do the best you can, and they will look very well—better, in a way, than if another had made them for you, because that will be your own work. When the design is finished in pencil go over it with liquid gilt, painting the sun a solid gold disk, the rays mere lines of gold, and the lettering slightly heavier. On the first page of the diary write in ink your age and full name and under this the year and day of the month. Then turn over the leaf and on the right-hand page rule a line exactly across the centre with red ink. At the top of the page write in red ink the day of the week and

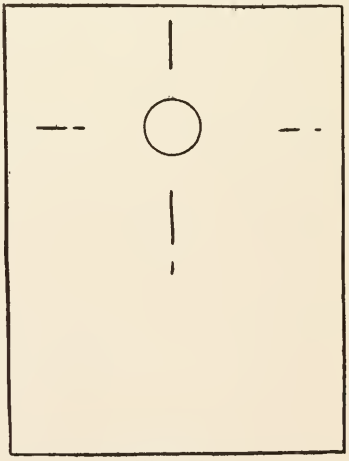


Fig. 148.

month and under the red line write the next day of the week and month (Fig. 150). Put down all dates and divisions in red ink. The book is now ready for the record of January 1.

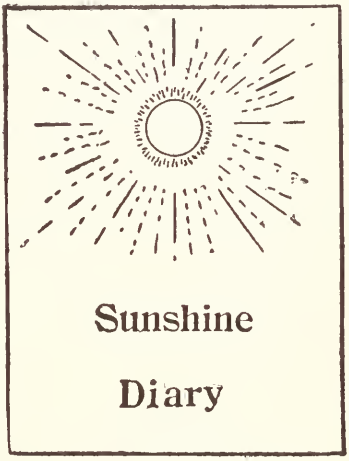


Fig. 149.

Before making any entry try to think of the kindest and pleasantest things said to you and done for you during New Year's Day, and with black ink write these, and these alone, for each day must reflect only beautiful thoughts and acts—nothing else is allowed in the "Sunshine Diary." On the second day of the month make a similar record on the lower half of the page; the third day turn over the leaf and carefully rule the next two pages as you did the first, which will make four equal divisions for four more days. Date each half of the page correctly and proceed with the journal. Continue in the same way until the end of the year and you will have a treasure well worth keeping all the days of your life. The very act of carrying out the "sunshine" idea will tend to strengthen all kindly feelings and cause you to be on the watch for happy items to jot down in your book.

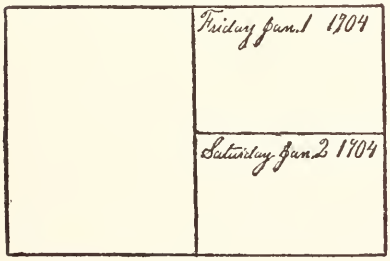


Fig. 150.

A Guest Book

Another work is the "Guest Book"—one in which each friend who calls to see you can write his name, with the date and a few remarks. One boy might draw a simple little pencil sketch under his name; another could write a joke in reference to some mutual experience. From one of the girls might come an apt quotation; from another an original rhyme—in fact, anything that would be interesting. Let the grown people also have the privilege of leaving their autographs with a few remarks in the "Guest Book," for they, too, are your friends. The book itself should be at least seven inches long and five broad; larger would be better. The common blank-book of good paper will answer the purpose; it can be covered with stiff linen, which is sold for dress lining and may be found in the shops. Cut the cover to extend beyond the book two or three inches (Fig. 151). The dotted line indicates the book. Adjust the cover evenly and crease it slightly along the edges of the book in order to know exactly how it will fit. Still holding the book in the left hand, carefully cut two flaps, in the extension at the top

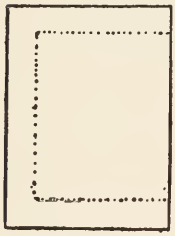


Fig. 151.

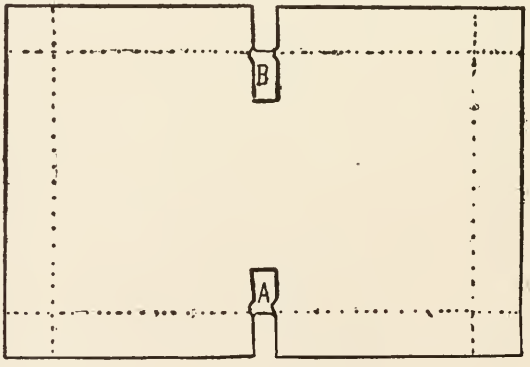


Fig. 152.

and bottom of the back. Remove and unfold (Fig. 152, A and B); turn down the flaps as in Fig. 152, and again place

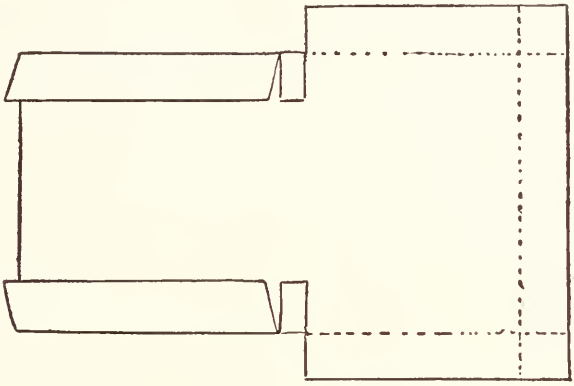


Fig. 153.

the linen on the book. Fold over the linen at the top and bottom of one side of the book binding (Fig. 153); do the

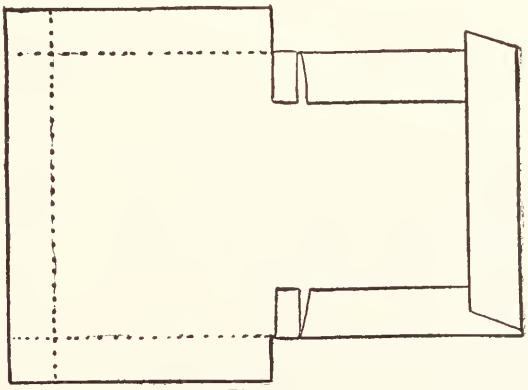


Fig. 154.

same with the other side, then turn in the outer edge (Fig. 154). Again remove the cover and, after creasing the folds,

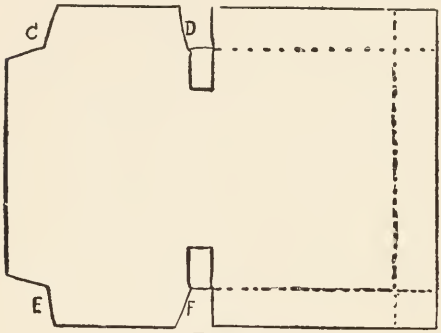


Fig. 155.

cut the four corners out, as in Fig. 155, C, D, E, F. Keep the flaps (Fig. 152, A and B) folded in, and place the cover on the book (Fig. 156). Paste the corners G and H firmly to the underlying piece of linen, do the same with the other side and the cover will be finished.

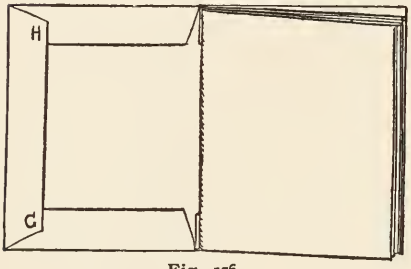


Fig. 156.

Letter the outside in deep, rich red, using paint and brush. If you cannot print the letters, write the title "Guest Book" in a bold hand with the brush.

Calendars

Calendars are always welcome and appropriate on New Year. Make yours of twelve pieces of heavy unruled, tinted writing-paper. Decide upon twelve persons whom you would like to think of often and cut twelve slips of white writing-paper of exactly the same size. Send one to each chosen individual and ask that the friend's name and some sentiment be written on the

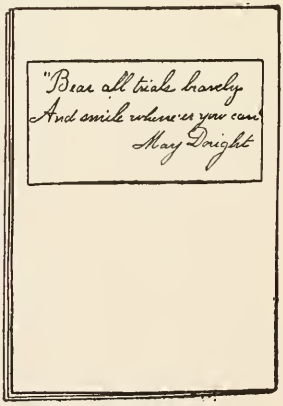


Fig. 157.

paper and that it be returned to you. Having received all the slips, paste one near the top of each sheet of writing-paper (Fig. 157); below paste one leaf of a printed calendar representing one month (Fig. 158). Use a Christmas card for an outside cover and through the two top corners of the calendar make round holes large enough to allow a silken cord, matching in color the tint of the paper, to pass through. Then

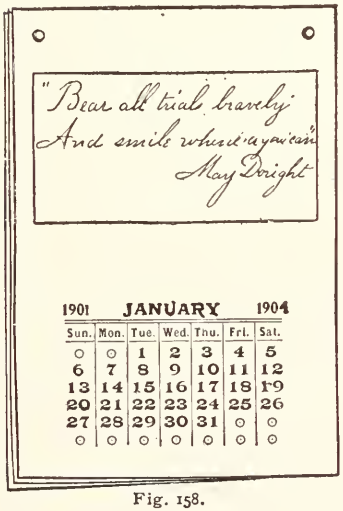


Fig. 158.

Fig. 159.

fasten all the pieces of the calendar together in order, January being the first and December the last (Fig. 159).

As each month passes by slide that leaf back on the cords, bringing after January, for instance, February to view. Hold the two loops of cord together at the top and hang the calendar where it may be readily seen.

You can also

Begin Illustrating Books

Do not be surprised! No knowledge of drawing and painting is necessary in order to illustrate in the new, easy fashion. Decide upon some short story you wish to embellish; then look among your scraps for appropriate pictures. Should you not find exactly what you want, make the pictures over to suit.

If the story introduces a jolly little maiden full of fun, and describes her as feeding her pet dog and laughing at his antics, and there is no such maiden in your collections, look for one with the style of face you think the girl in the story ought to have. When this is found and the body is not satisfactory, cut off the head and hunt up an appropriate body to fit it; that obtained, paste the pretty head on the new body and cut out the entire figure. Find a dog, in the correct position, in some old magazine or newspaper, cut out the animal, and before pasting the group in place try the effect of both on a blank piece of white paper. Slide the figures together and apart until you have them where they look best; then paste the girl and dog neatly in position on the white paper, and the full-page illustration is ready for insertion in the book.

Always leave a wide white margin on all illustrations; never crowd the picture up to the very edge of the page if you desire it to look well, and be sure to dampen the wrong side of each picture before attempting to paste it in your

book, that it may be smooth and not wrinkle. The new leaf for the picture should be cut wide enough to allow a quarter-inch projection or more over on the opposite page, as in Fig. 160, OO, where it can be pasted down on the inner margin of the other leaf. The dotted line indicates the centre of the book.

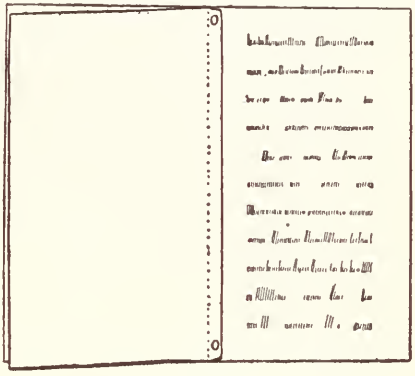


Fig. 160.

Bound books will not admit of many extra leaves being inserted, so you can select only a few of the incidents in the narrative for illustration. Use care that the picture shall express your idea of the event or place you desire to represent. Sometimes it may happen, by lack of suitable material, that you cannot finish certain pictures for days or weeks after they are begun. In such a case bide your time until the wished-for designs appear, and in the meantime go on with the other illustrations.

If the book is paper-covered, you can take it all apart, insert as many pictures as you desire and fasten it together again. When obtainable use

Colored Pictures and Photographs

as illustrations. You may chance to find appropriate colored reproductions from water-color sketches, that will serve the purpose without alteration. Such would give a fine appearance to your book. Unmounted photographs can also be employed, but, if possible, avoid different styles of pictures in the same work. Keep the colored designs

for one book, the prints for another, and the photographs for a third. Bear in mind that, whatever the nature of the illustrations, you are to use only such as appeal to you and express your ideas; the scheme will lose individuality—that is, it will not represent your choice—if you select what others may deem best in preference to that which you would have chosen if left unmolested. It is the individuality which gives value to the work.

Never attempt to illustrate a valuable book in this new way, though it would not injure the volume if you found a good unmounted picture of the author and pasted it on one of the fly-leaves in the front of the book. The portrait would add to the value and interest of the volume, as would also items of information on the subject of which the book treats, if pasted on an extra loose leaf and left in the back of the book.

When you have a collection of snap-shots that you wish to preserve, make

A Photograph Book

in which to keep them. Cut two pieces of stiff pasteboard, each 6¼ inches wide and 5¾ inches high. Use strong paste to fasten these on one side of a strip of heavy linen of a soft green color, 14¼ inches long by 6¾ inches wide. Leave a space of uncovered linen three-fourths of an inch wide in the centre, Fig. 161. This will give the foundation for the

Fig. 161.

cover of your book. Draw the linen tightly over the edge of the card-board at the top and bottom, paste it down smooth and even; then paste the two end-pieces over, thus binding the four edges of the book. Cut sixteen leaves from heavy dull-surfaced paper, matching the green linen in color, make each leaf 6¾ inches wide and 5½ inches high. Two of the leaves serve as lining for the cover, leaving fourteen leaves or twenty-eight pages for the unmounted photographs. Paste the first leaf on the left-hand side of the cover, let it fit over the turned-in border of linen and extend across the centre onto the edge of the other card-board, LL to KK, Fig. 162; the dotted lines indicate the turned-over linen underneath the paper leaf which is used as a lining. Take a second leaf and turn down the left hand edge to a depth of ¾ of an inch, leaving the leaf 6 inches wide. Cover the ¾ of an inch extension with paste, then lap it over on the left-hand side of the centre and paste securely. The place where the side of the leaf should be fastened down to the lining of the cover is represented by MM in Fig. 162. Fig. 163 shows the space MM covered by the side of the leaf, the diagram giving two leaves properly glued together,

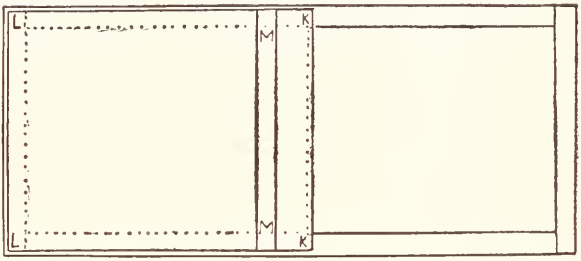


Fig. 162.

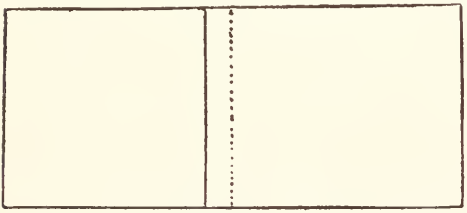


Fig. 163.

the dotted line indicates the centre of the book. As each leaf is fastened in, turn it over and paste the next one on it as in Fig. 163. Continue adding leaves, always allowing the right-hand leaf to overlap the left three-quarters of an inch. When the last leaf is fastened in place, paste it down tight on the right-hand side of the inside of the cover, where it will form a lining concealing the raw edges of the linen and the blank pasteboard as the first leaf covered the left-hand side of the inside of the cover. This system of fastening the leaves together will cause them to fold in the back where there will be no raw edges. Fig. 164 gives four leaves, showing the back where they are folded over after each is joined to the preceding leaf. When the book is finished the back hinge part of the cover is free from the leaves, leaving an opening from top to bottom large enough to run a slender pencil through when the book is opened. If desired the cover can be decorated with the title "Snap-Shots."

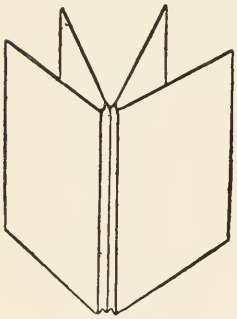


Fig. 164.

Making Valentines.

CHAPTER VI

ORIGINAL VALENTINES

ALWAYS alert, chubby little Cupid works hard on St. Valentine's Day; his duties are many, and his pretty bow sends the arrows flying in all directions. He is a merry little fellow, full of queer pranks and a great favorite. The venerable St. Valentine seems to have merely loaned his name to the fourteenth of February, leaving all the duties to Cupid, who appears to be well pleased with the arrangement. For hundreds of years past the young people have been as anxious to send and receive valentines as at the present time

In Former Days,

before valentines were dropped in the mail-box, girls and boys had a great deal of fun sending them to each other. Generally the young folks waited until twilight; then each would sally forth in his neighborhood, lightly step up to the front door of the house where the valentine was to be left, and without the least noise slip the paper under the door, ring the bell and scamper away as fast as possible, to avoid being seen. Valentines to-day bring the same thrill of pleasure, and when the whistle of the postman announces the arrival of the mail on the eventful day, eager fingers are impatient to open the envelope and discover the treas-

ure within. Then the question follows, "Who could have sent such a lovely valentine to me?"

Before making original valentines try to think of some particular study or pursuit in which each friend is interested to whom you desire to send a token on February 14. One may have a talent for painting, another for music; a third may delight in flowers, and so on throughout a long list of subjects which will furnish you with many suggestions for

The Most Appropriate Valentine

to be sent to each. As a little practice before using ideas entirely your own, try making the valentines here described. The mystic four-leaved clover (Fig. 165) would be just the thing for a companion who delights in hunting that symbol of good luck. This valentine is very simple and can be made in a short time.

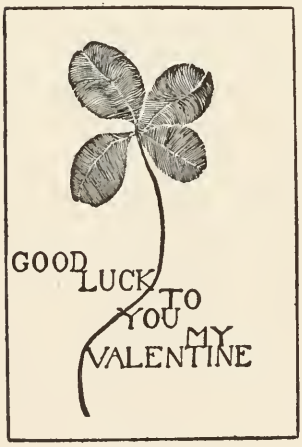


Fig. 165.

Cut a sheet of unruled heavy writing-paper in halves and on one piece trace

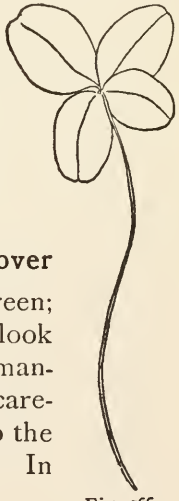


Fig. 166

The Four-leaved Clover

(Fig. 166). Paint it green; an even flat tint will look well if you cannot manage shadows, but be careful to do the work to the best of your ability. In plain lettering mark the words,

"Good Luck to You, my Valentine;"

then slide the missive into an envelope large enough to contain an unfolded half-sheet of paper. In case you happen to have a natural four-leaved clover which has been pressed, use it instead of the painted one, and take a whole sheet of paper so that the brittle leaf may not be exposed, but can be secured inside the sheet on the third page by means of a little paste. With the pressed clover the lettering should be made on the outside of the sheet of paper before the leaf is placed within.

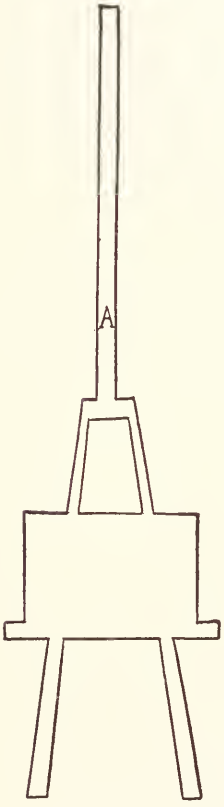


Fig. 167.

Fig. 168.

Another easy valentine to make is

The Easel Holding a Picture

Cut this from stiff paper or light-weight card-board (Fig. 167). First trace the design on the card-board; then

cut it out and paint the easel golden-brown on both sides, except the part which forms the canvas for the picture and the cross-piece for the lettering. Leave these white; draw a line at the bottom of the canvas and letter the strip,

"To my Valentine."

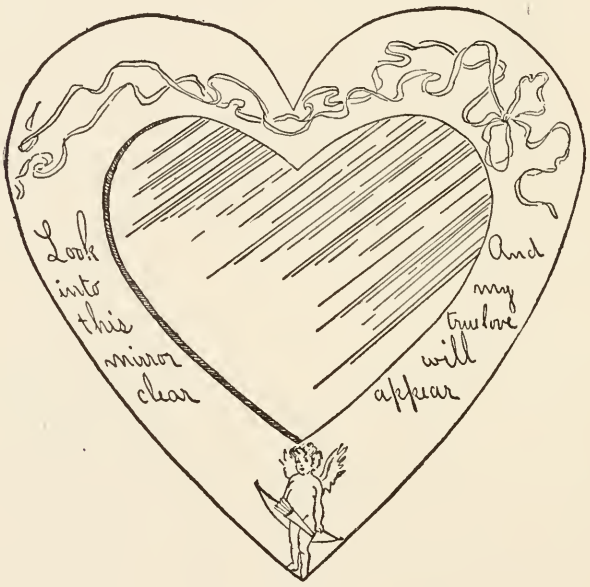


Fig. 169.

Paste any pretty colored floral design you may possess on the blank space or canvas left for the purpose. Bend down the supporting strip (A) projecting from the top (Fig. 167), and the miniature picture and easel will stand alone and be ready to send to some friend who is studying drawing or is interested in art (Fig. 168).

To an attractive friend who has no special fancy for any

particular avocation, send the valentine shown at Fig. 169. Make it of

Two Heart-shaped Pieces

of stiff white paper and a small piece of broken mirror. Cut the heart according to the size of the glass (Fig. 170);

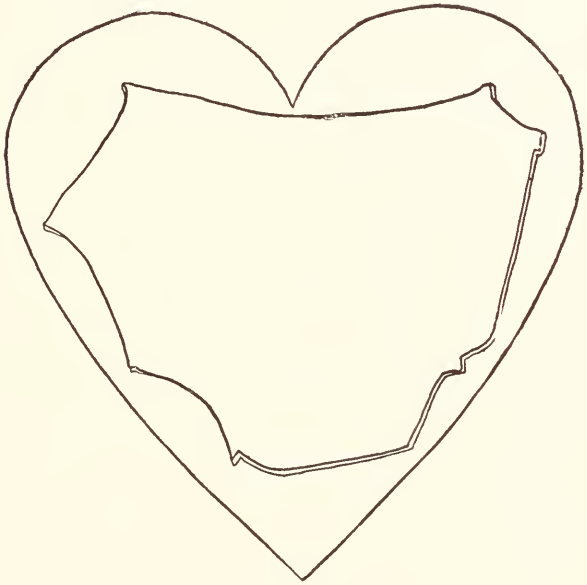


Fig. 170.

then with strong paste fasten the mirror on the heart (Fig. 170). Cut another heart exactly like the first, and and in its centre make a heart-shaped opening as large as possible, while leaving it small enough to cover well the edges of the glass. If you do not know how to make a heart-shaped design trace Fig. 169. Decorate the top part with a painted pink ribbon, and on one side write,

"Look into this Mirror Clear,"

and on the other,

"And My True Love will Appear."

At the bottom point of the valentine paste a Cupid; then using strong paste fasten the heart-shaped frame over the glass and lay the valentine under several books until the paste is dry, taking the precaution to put a clean piece of paper underneath, and another over the top of the valentine to keep it perfectly fresh and clean. Any other style of decoration may take the place of the ribbon and Cupid. Small colored embossed paper forget-me-nots could be used.

Should one of your friends delight in fireworks displays give her

The Firecracker

shown at Fig. 171. Roll together a piece of stiff paper two inches wide and three inches long (Fig. 172); let the two sides overlap each other slightly and join them securely

Fig. 171.

with strong paste, forming a hollow tube. Have the paper the peculiar red of genuine firecrackers, if you can obtain such. For the inside take a piece of white paper four inches long and a trifle less than three inches wide and write on it these words:

"Your eyes are so bright
That if they were mine,
I would soon have a light
For this queer valentine."

Fig. 172.

In the turned-over edge at the bottom of the paper paste a waxed string, as in Fig. 173. Then roll the paper and insert it in the red tube (Fig. 171).

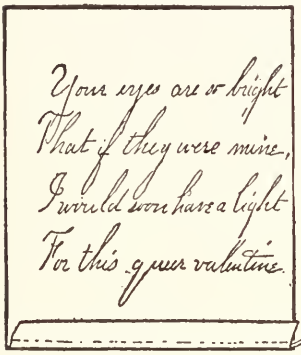


Fig. 173.

One of the prettiest customs of St. Valentine's Day was instituted by the daughter of Henry IV. of France, Madam Royal, who built a palace and named it the Valentine. She then gave a grand party in honor of St. Valentine where each lady received a beautiful bouquet of flowers from one who was chosen as her valentine. The same gallantry was repeated ever after on like occasions. The idea of the valentine flowers is very pleasing, and we will use it in a modified form, but instead of cut blossoms in a bouquet we will have

A Pot of Growing Flowers

(Fig. 174). Trace on reddish-brown card-board (Fig. 175), and cut it out, also cut the point B and the slits C and E. Bring the two sides together, sliding the end D over, not under, through the slit C, at the same time pushing the point B into the small slit E; and bend back the extension D on the wrong side to hold the sides together and keep the flower-pot upright. Cut out the bottom (Fig. 176) and let it drop down through the top of the flower-pot until it lodges. Straighten and fit it in evenly; then cut out the top (Fig. 177) of dark card-board, as it represents the earth. Of course, one cannot dig holes in paper earth to plant paper flowers, so slits must be made according to Fig. 177. On

Fig. 174.

white card-board trace Figs. 178, 179, and 180; paint them to resemble as nearly as possible natural pinks, and plant them

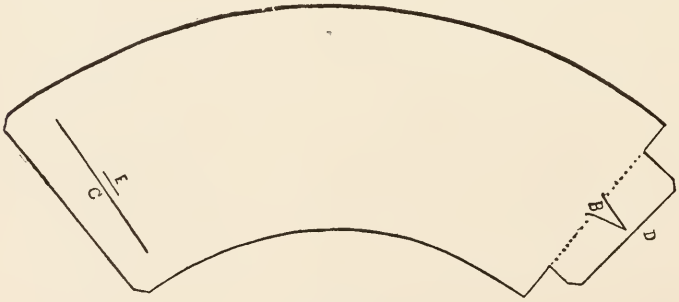


Fig. 175.

in the paper earth in this way: slip the rounded extension of Fig. 178 through the slit F (Fig. 177). Bend back the angular part K and slide its extension L through the small slit T. Turn the paper earth over on the wrong side, holding the flowers in position the while, and bend up the roots of the two projecting pieces against the under side of the disk or earth; paste them in place. Next plant Fig. 179 in the same manner, sliding its rounded extension through slit G, and its smaller one through slit O. Plant the last flower (Fig. 180) through slit H; adjust the earth or top disk, and the finished work will be a little round flower-pot filled with growing pinks standing up separately from each other and looking very bright and natural (Fig. 174). On a dainty piece of paper write this message:

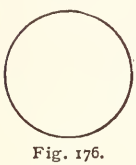


Fig. 176.

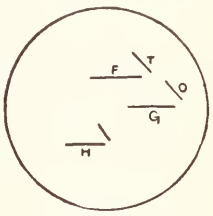


Fig. 177.

Fig. 178.

"Go, Little Flowers,
Salute My Valentine,
Who Can, Who May,
Who Must Be Mine."

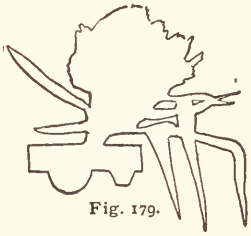


Fig. 179.

Place the note inside the flower-pot. Pretty colored printed flowers or embossed ones for scrap-books, which may be bought in almost any toy-store, can be substituted for the pinks. Fasten them in position by making three

Fig. 180.

tracings of Fig. 181 and pasting a group of flowers and foliage on each one; these extra pieces will furnish the flowers with proper paper roots, which can be planted and fitted in the paper earth in the same manner as the pinks.

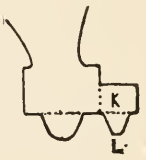


Fig. 181.

A Gentle Little Friend

should receive the valentine which is shown at Fig. 182. Cut from white card-board the circular disk (Fig. 183); around its edge write:

"Lift the Loop and You Shall See
That Which Makes Me Think of Thee."

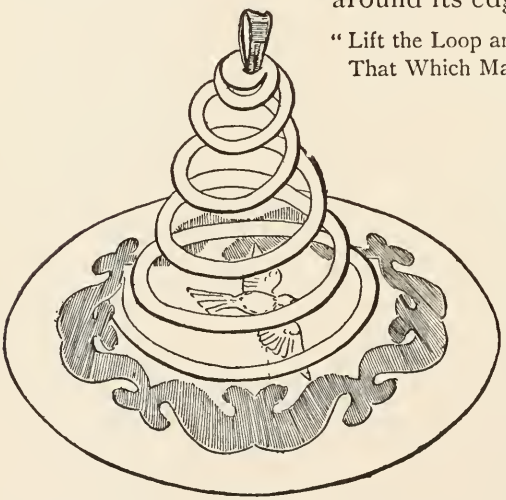


Fig. 182.

From fancy gold paper cut a circular band (Fig. 184) smaller in circumference than the card-board; fold it through the centre (Fig. 185), bring the folded ends together and again fold (Fig. 186). Once more fold (Fig. 187) and from this cut the outline seen in Fig. 188, being careful not to cut the folded ends P and Q. Unfold the paper and you will have Fig.

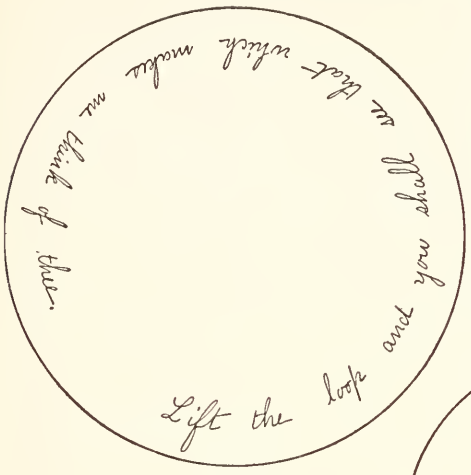


Fig. 183.

189. Place this ornamental golden band on the white cardboard. It should fit just inside the writing. Stick it down slightly here and there with a very little paste; then make Fig. 190 of fancy white paper. Insert the scissors at the beginning (S) and cut the spiral around and around in one unbroken strip until the centre is reached. In the centre make a short slit and push the two ends of a narrow white ribbon through the slit; then turn the spiral over and paste each end of the ribbon flat against the paper, as in Fig. 191. Have ready a white paper dove and fasten it in the centre of Fig. 183, which has previously been decorated

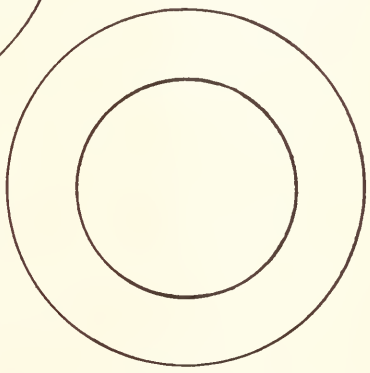


Fig. 184.

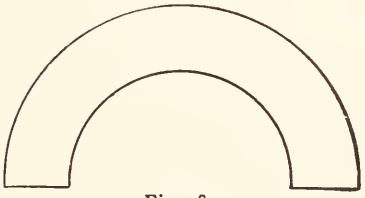


Fig. 185.

Fig. 186.

with the gold-paper design. Slide the end S of the spiral under the edge of the gold band, placing the spiral so that it

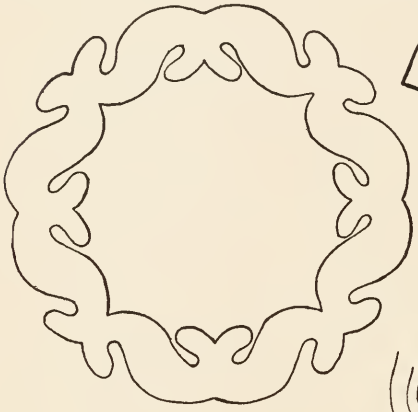


Fig. 189.

Fig. 187.

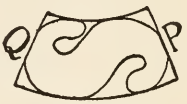


Fig. 188.

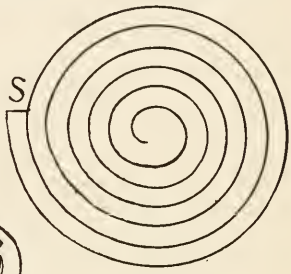


Fig. 190.

Fig. 191.

will lie flat and even inside the golden paper and will cover the centre of the valentine. Lift the cover by the loop and you will have a glimpse of the white dove, which means peace and gentleness.

CHAPTER VII

VEGETABLE ANIMALS AND FRUIT LANTERNS

DO YOU know that with the aid of a little enchantment equal to magic employed by the fairy folks of old, you can make a tiny fowl, one small enough to stand on the palm of your hand? A certain process which you shall learn will cause a common raw potato to change into a wee turkey of which anyone might well be proud.

The wands you will use for the work differ in nature and appearance and are far superior to the fairy wands; the latter are merely stiff sticks said to be endowed with magical powers, while yours are of most wonderful workmanship and adapted to any use to which you care to put them. More than that, you have complete control over the wands; at your command they do your bidding, making all kinds of useful and beautiful things, from the most delicate and fragile articles to the largest and heaviest creations. One of your wands is known as the right, the other as the left hand. Look at these pliable and exquisitely fashioned wands, think of all they have accomplished and may do for you, then set them both to work on your

Potato Turkey

Select a small potato (Fig. 192), break off the ends of three burnt matches and force the longer portions into the potato, two to serve as legs, and one as a support (Fig. 193). Trace Fig. 194 on stiff brown pasteboard, an old box-lid will be the best thing to use, its surface being dull and almost the same in color as the potato. Cut out the tracing and mark eyes, mouth, and tuft on it with ink (Fig. 195). If you wish to have your turkey look extra fine, make wattles of red paper or cloth (Fig. 196); fold as in Fig. 197, and paste the band-like upper portion over each side of the turkey's neck, allowing the lower flaps to hang free (Fig. 198). Cut a slit in the potato (Fig. 192, A-A) and insert the head, pushing in the extension as far as the dotted line, or until it fits (Fig. 199). Make a small opening on each side of the stick in two curved you have only choose two with your fore- bend the ribs they are round- cling to the sides of feathers for the tail, turkey (Fig. 199, C) and feathers for wings. If stiff feathers, small ones, and finger and thumb (Fig. 200) until ed enough to the turkey. Use stiff first making holes in

Fig. 192.

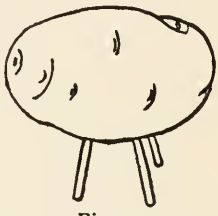


Fig. 193.

Fig. 194.

Fig. 195.

Fig. 196.

Fig. 198.

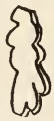


Fig. 197.

the turkey in which to insert them (Fig. 199). Push the feathers in securely, and should they stand up unevenly at

Fig. 199.

Fig. 200.

Fig. 201.

varying heights, trim them carefully with scissors and the turkey will be finished (Fig. 201).

In the South a young pig, called

A Shoat,

is considered as desirable as a turkey and is eaten with much relish. Of course, each person is served with only a portion and cannot have a whole one, as is your privilege; for your shoat, like the turkey, will be very small, no larger than a lemon, and of the same color—in fact, it is a lemon to begin with (Fig. 202). Four sticks furnish the legs (Fig. 203). The ears are

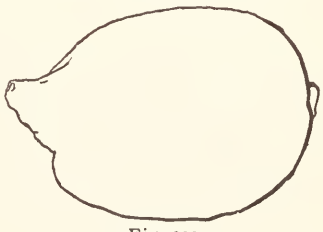


Fig. 202.

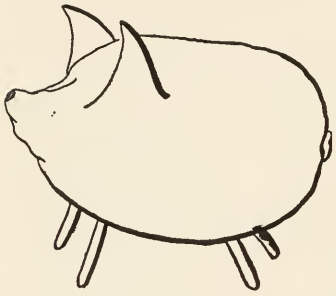


Fig. 203.

formed by cutting the skin in the shape of a V on each side of the pointed end of the lemon (Fig. 204, B) and bending up the points (Fig. 205). A slender stick bent at short intervals (Fig. 206) until it simulates a twist or curl is used for a tail (Fig. 207).

In cutting the ears be cautious not to pierce entirely through the skin; allow the point of the knife to enter only deep enough into the rind

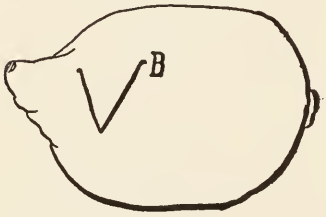


Fig. 204.

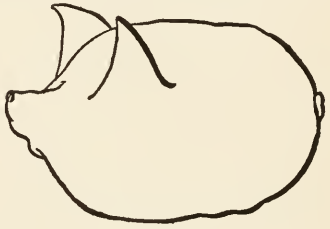


Fig. 205.

to cut a piece of sufficient thickness to turn up without breaking, and have the slender sticks used for legs and tail sharpened at one end so they may readily be pushed into the lemon. Ordinary wooden toothpicks will answer the purpose, but they must first be broken into shorter lengths for the legs. The eyes are two black-headed pins.

Fig. 206.

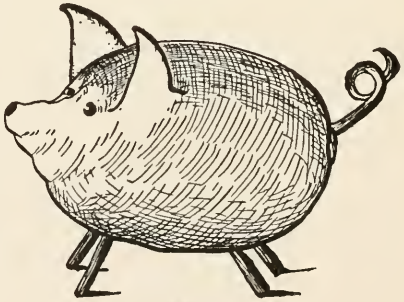


Fig. 207.

Turtle Soup

Fig. 208.

is thought a great delicacy by some families, who deem a holiday dinner incomplete without the dish. While we do not care for the soup, we would like a small turtle, one that will not snap at us but be content to remain quiet and look natural.

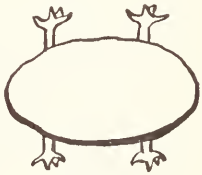


Fig. 209.

Ask for a large raisin (Fig. 208) and six cloves, five without and one with the round seed; work in the four cloves with claw-like ends to serve as feet (Fig. 209). Use the reverse end of a clove for the tail (Fig. 210) and the round seed clove for a head (Fig. 211). Bend the head and tail up and the feet down (Fig. 212). Beautiful golden pumpkins hold a prominent place in the minds of Americans. Beside the delicious pies made of the yellow fruit, there are the

Fig. 210.

Fig. 211.

Fig. 212.

Funny Lanterns

fashioned by cutting a semblance of a face in the pumpkin, shaking out the inside fibre and seeds, and, in the evening, placing a lighted candle in the queer head, causing the light to shine through eyes, nose, and mouth in a manner startling to those unaccustomed to the sight.

The real pumpkin is large and heavy to handle, but you can have

A Substitute

in the form of an apple. Choose one that is deep red in color, in order to have the greatest possible contrast be-

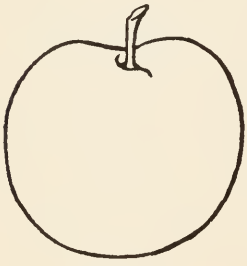


Fig. 213.

Fig. 214.

Fig. 215.

tween the features and the head proper. It will not be necessary nor desirable to light up the face, the apple head is comical enough with the face merely cut in its surface and the work is very easy. Cut out from the apple (Fig. 213) two triangles near the top for eyes (Fig. 214); directly below the eyes but in the central part cut the triangular nose (Fig. 215); under the nose make the mouth in the shape of a slender crescent (Fig. 216), and tie a ribbon on the stem as an ornamental headdress (Fig. 217). There! you have fairly made the apple laugh. Only see how it is stretching its mouth in a broad grin!

Fig. 216.

Fig. 217.

CHAPTER VIII

PASTEBOARD MODELS FOR A HOME DRAWING CLASS

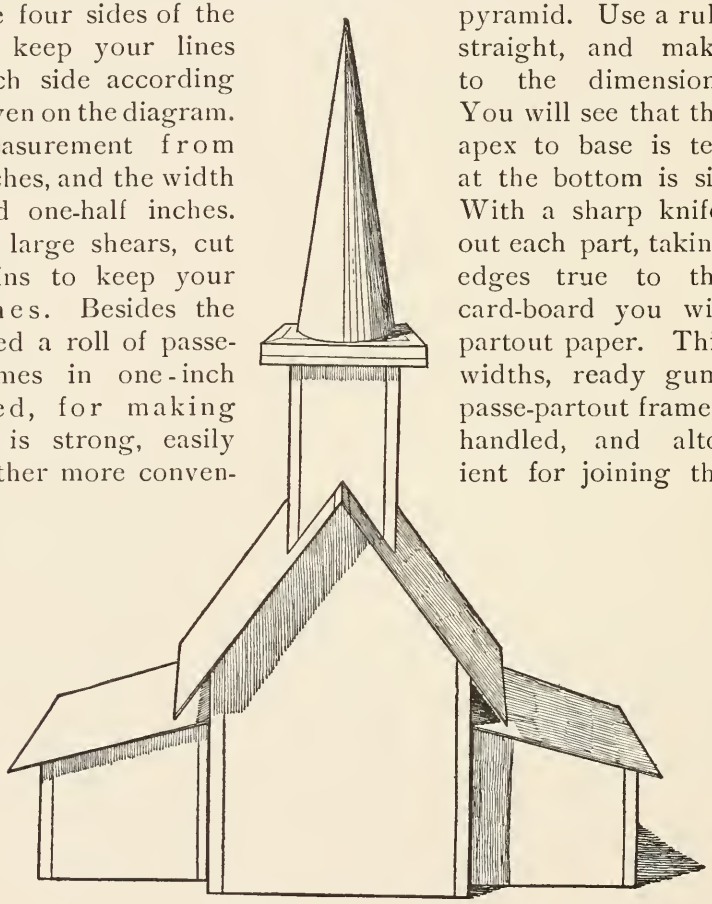
STUDY drawing at home and make your own models; form a class of several girls and work together; criticise one another's drawings, and get a criticism from an artist whenever you can. Much may be accomplished in this way if you have the enthusiasm, perseverance, and will to carry it through. Starting with one object, complete in itself, a variety of forms may be evolved, and combinations can be made until an entirely new model is produced. Such, for instance, is the church shown in the illustration. First there is the house, then the house with a chimney, the house with chimney and one wing, the house with chimney and two wings; then the church, which is made by adding turret and steeple, the church without wings, and the church with wings. A number of times this model may be used, changing the position and adding to or taking from it, and a different picture will be the result of each drawing.

Simpler models like

The Pyramid

can also be made, and it is well to try your hand on this before attempting the more complicated forms.

Lay a sheet of heavy card-board flat on your work-table and draw carefully four triangles like Fig. 218. These are for the four sides of the pyramid. Use a rule to keep your lines straight, and make each side according to the dimensions given on the diagram. You will see that the measurement from apex to base is ten inches, and the width at the bottom is six and one-half inches. With a sharp knife, or large shears, cut out each part, taking pains to keep your edges true to the lines. Besides the card-board you will need a roll of passe-partout paper. This comes in one-inch widths, ready gummed, for making passe-partout frames. It is strong, easily handled, and altogether more convenient for joining the



Pasteboard Model of Church.

parts of the models than ordinary strips of paper. Should the passe-partout paper be out of reach use new cotton cloth

cut in even one-inch strips. Of course the cloth or paper must be white. Cut off a strip of your gummed paper a little longer than the long edge of the triangle. With a pin at each end, pin it to the table, the gummed side up, and draw a line lengthwise through the middle, dividing it exactly in half. Have ready a glass of clear water and a paint brush, dip the brush in the water, and with it moisten one half of the paper. Over the wet half lay one of the triangles so that its long edge almost touches the central line, then gently press it until the paper holds fast to the card-board (Fig. 219). Remove the pins and turn the triangle over to make sure the paper is quite smooth on the right side; then lay it down again, moisten the other half of the gummed surface and

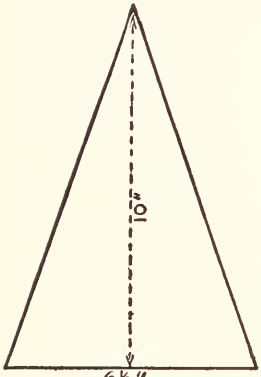


Fig. 218.

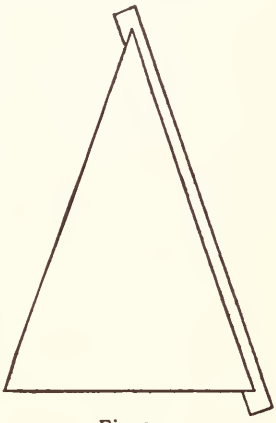


Fig. 219.

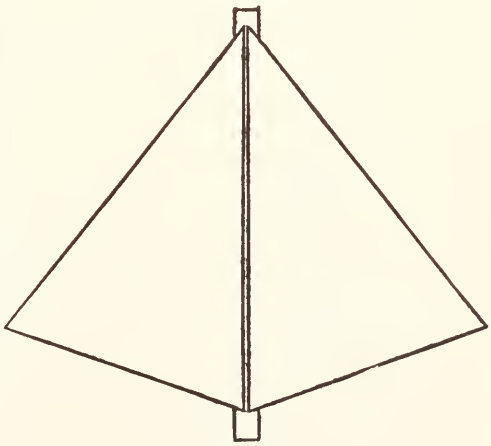


Fig. 220.

press another triangle over that part, keeping the edges of the two triangles perfectly parallel, but not touching. The

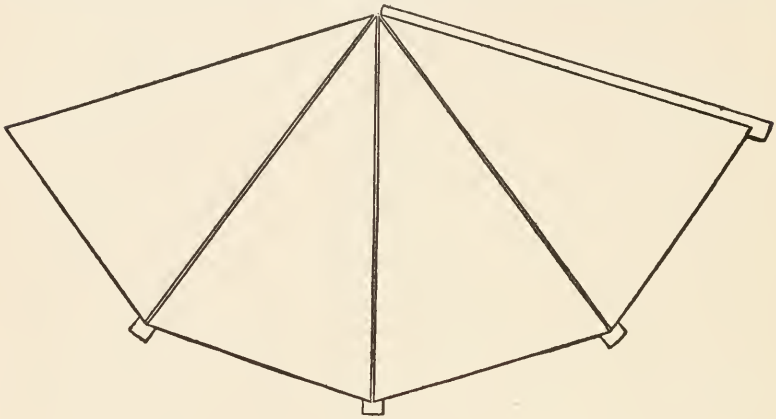


Fig. 221.

space between the edges must be left to give room for the bending of the corners (Fig. 220). Pin a second strip of paper to the table, moisten one half, and press still another triangle in place; continue doing this until all four sides of the pyramid are joined as in Fig. 221; then bring the last two edges together, while holding it in your hand, and press the moistened paper down, smoothing out any wrinkles that may appear. Lastly, trim off the ends of the paper at the bottom, and stand your pyramid up, holding it so that its base will form a perfect square (Fig. 222). Do not allow it to flatten and form a diamond. The top edges of the

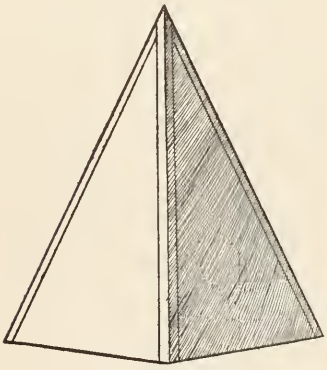


Fig. 222.

paper should be trimmed off as the sides are put together.

There are six parts to

The House,

two sides, two ends, and two halves of the roof. Draw these on your heavy card-board, like Fig. 223, the roof; Fig. 224, the side, and Fig. 225, the end, making them according to the dimensions given on each diagram. Put the house together, as you did the pyramid, with the passe-partout paper.

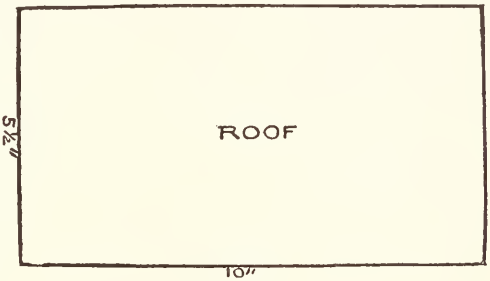


Fig. 223.

When you have joined the sides and ends of the house and have fastened the two halves of the roof together, paste strips of the passe-partout paper along the upper edges of the sides of the house, as in Fig. 226. These strips must be on the

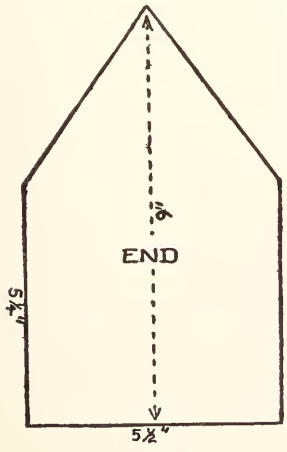


Fig. 225.

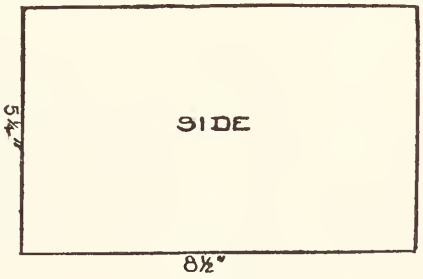


Fig. 224.

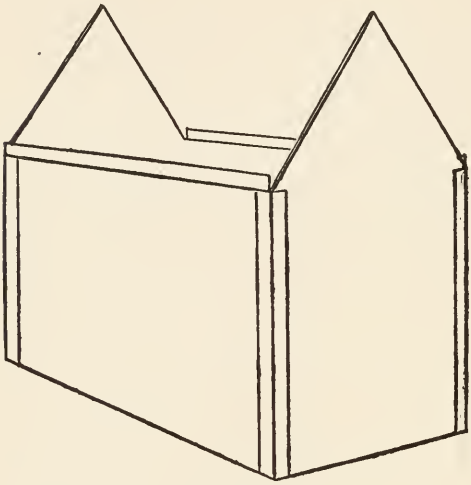


Fig. 226.

inside, and half of the paper must extend above the edges of the sides. Moisten this part and, fitting the roof to the house, put your hand inside and press the paper up against the roof; this will hold it securely in place. In fitting the roof on, be sure it extends exactly the same distance over each end of the house (Fig. 227).

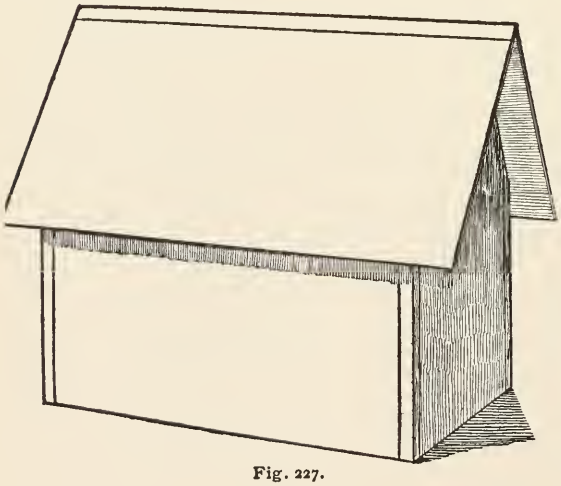


Fig. 227.

The Chimney

is adjustable and is not fastened to the house. Make four sides; two like Fig. 228, two like Fig. 229. The dimensions of each side are given on the diagrams. In putting the chimney together, paste your strips of paper only as far

up as the dotted line at the top, the part beyond this line is to be turned over as in Fig. 230, which shows the completed chimney. Make

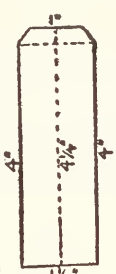


Fig. 228.

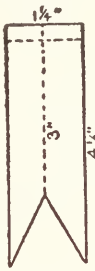


Fig. 229.

Fig. 230.

The Wings

with slanting roofs like the ones shown in the illustration of the church. Fig. 231 is the highest side, which goes next the house when the wing is added; Fig. 232 is the lower side; Fig. 233 is for the two ends, which are exactly alike, and Fig. 234 is the roof. The dimensions are given on the diagrams.

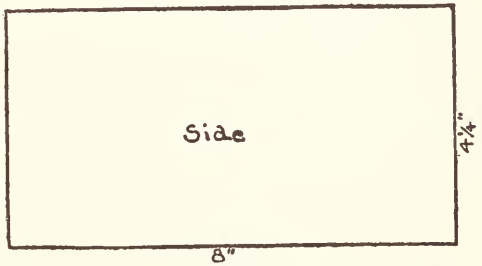


Fig. 231.

The Tower and Steeple

which transform the house into a church are shown in the illustration. Cut two sides for the tower like Fig. 235, and two like Fig. 236, and put them together like Fig. 237. The notches in the lower part of the tower and of the chimney allow them to sit astride the roof, which position holds them in place without making

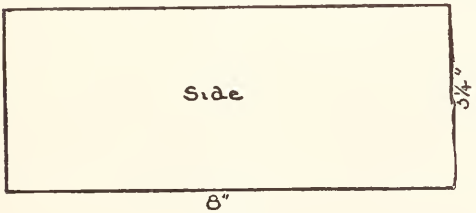


Fig. 232.

them permanent. Fig. 238 and Fig. 239 are for the cornice of the tower, which is something like a box with a square

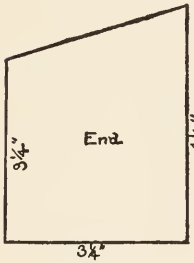


Fig. 233.

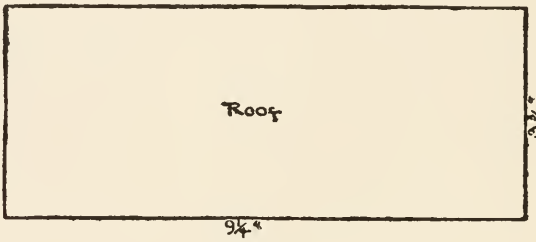


Fig. 234.

opening at the bottom and a round hole at the top. Cut Fig. 238 according to the dimensions given and bend at the dotted lines, first the lengthwise lines, then the cross ones. Allow the laps with the trimmed corners to come on top of the others. Put the two end edges together with the gummed paper to form a square, then with a drop of glue or paste at each corner fasten the laps in position, as shown in Fig. 240.

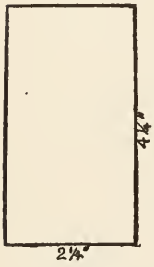


Fig. 235.

Fig. 236.

Fig. 237.

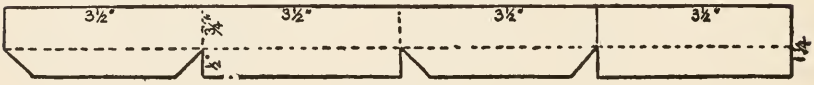
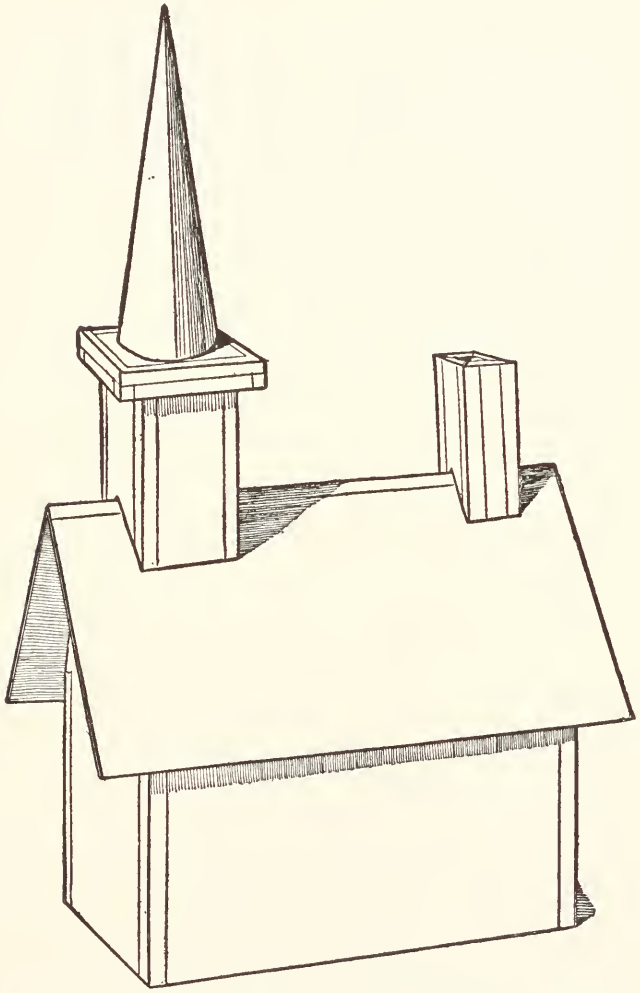


Fig. 238.

In the centre of a perfect square, made according to the dimensions on the diagram, Fig. 239, cut a circular hole;



The Tower and Steeple which Transform the House into a Church.

paste strips of paper along the four edges of the square, Fig. 241, bend down the free edges of the paper and paste

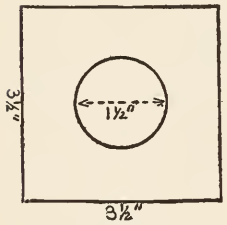


Fig. 239.

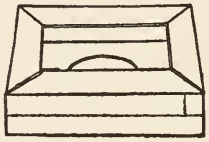


Fig. 240.

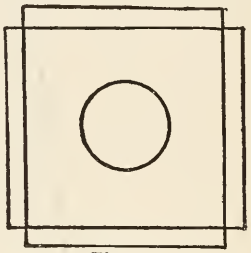


Fig. 241.

the square on top of the cornice. Fig. 240 is the cornice with top down to show its construction. Cut the steeple from rather heavy drawing-paper, like Fig. 242, keeping to the dimensions on the diagram. Turn in the lower laps and

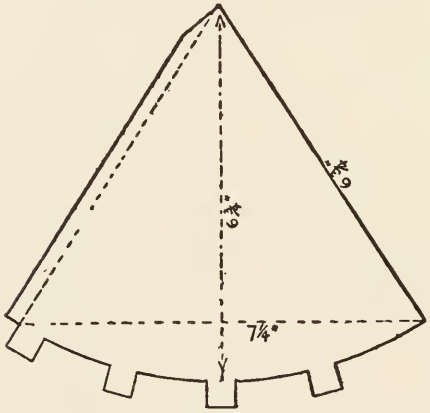


Fig. 242.

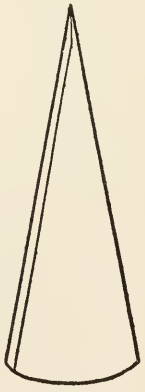


Fig. 243.

paste the side lap over the corresponding edge to form a cone (Fig. 243). Drop a little glue on each of the lower laps, place the cone directly over the circular hole in the

top of the cornice, and, slipping your fingers through the hole, press the laps down until they are firmly fixed. Fit the cornice on the tower, but do not attempt to glue it, for it will hold its place quite well without.

Your own ingenuity will suggest other models to be made in this way; any angular object is easily constructed, and curved ones are not impossible.

CHAPTER IX

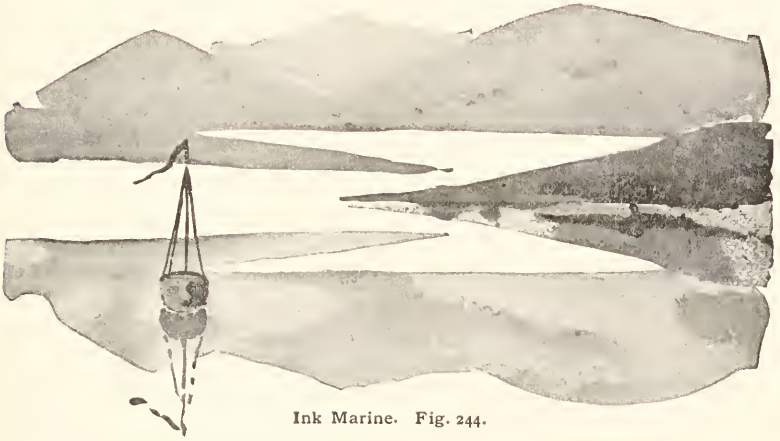
QUICK INK PICTURES

WHEN you happen to drop ink on paper you may be using, do not look disconsolate and feel uncomfortable. Make a joke of the accident by turning the blot into something funny. Fold the paper over the ink-spot, press the two sides together; then open the fold, and you will find the dull, round blot transformed into a queer, comical-looking object the like of which was never seen on land or sea. The strange thing about these oddities is that try as you may you cannot coax any two ink-drops to change themselves into the same shape; they utterly refuse to do so. Experiment with them and you will soon realize that each has its own independent idea regarding the figure it will assume, insisting, when you press it, upon taking the matter into its own hidden hands and turning into whatever it pleases. The various results are generally decorative and might often be used with good effect for book-plates.

If You Have a Group

of three or four ink-drops, they may be controlled to a certain extent. Hold the paper so that the wet ink will trickle downward, and you can join the blots together, elongating the design; then, when the paper is folded lightly, if you

press the ink with short, gentle strokes out sidewise the tiny splashes tend in that direction, and an upward movement will cause the ink to spread upward—sometimes in little streaks, again in a bulging way, giving an uneven, undulating boundary. Should the paper be folded across the ink the result would be a single figure, while an allowance of an eighth or quarter of an inch space before creasing the



Ink Marine. Fig. 244.

paper gives two designs, one a duplicate because a print of the other. A similar method of making ink-impressions is to splash the fluid on the paper with a paint-brush and then to fold and press it; or, group drops of ink with the splash of a brush and press the two sides of the paper together.

The ink-impressions may be made to take the form of

Landscapes and Marines

Often very pretty effects can be produced in this simple manner. Fig. 244 is a suggestion showing a stretch of sky with mountains as a background and points of land jutting

out into the sea for the middle distance, while the foreground is entirely of water, which reflects the distant purple hills. The picture is readily made, but the work must be rapid to insure success, as delays cause the ink to dry in spots, which ruin the design. Fold through the centre a piece of blank, unruled paper from a large-sized writing pad; open it and on the upper portion mark the sections according to diagram Fig. 245. The dotted line indicates the crease through the centre of the paper and

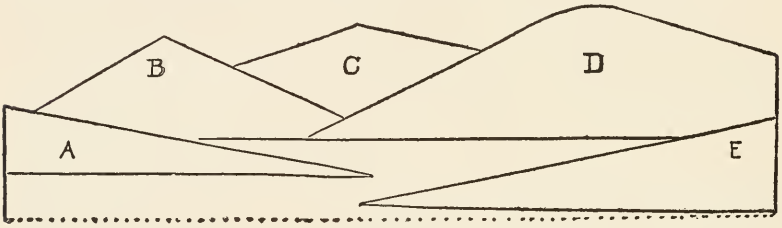


Fig. 245.

gives the distance at which the first sections should be placed above the fold. With a lead-pencil lightly trace the divisions: have ready a bottle of ink, a common water-color brush, a glass of water and a clean dinner-plate. Dip the brush in the ink and dab it on the plate several times; then do the same with the water, mixing ink and water together. Try the strength of this mixture on a scrap of paper; if it corresponds to the tone of the second point of land in Fig. 244 (or A in the diagram) it is ready for use. B and D (Fig. 245) require a degree lighter than A, so mix more water than ink on a clean place in the plate. C (Fig. 245) is the faintest mountain and needs the most water mixed with ink. Use ink as it comes from the bottle for E (Fig. 245), the nearest point of land, as that is the darkest portion. Test the three tones and keep changing them, adding more water

as needed, until you are satisfied that each one is of the required strength; then wash the brush clean and be sure everything is ready for the work. Having once commenced, you cannot stop an instant until the sketch is finished; understand exactly what you intend to do and how you are to do it before beginning, as there will be

No Time for Deliberation,

and you must work as fast as possible. Dip the brush in the lightest tone of diluted ink, have it well charged with the fluid, and in swift strokes paint C. Without stopping, take up the next lightest tone on the brush and sweep in B and D, then the darker, A, and finish with E in pure ink. Fold the paper immediately, and, holding it down flat on the table with the left hand, press with the right; rub the paper all over again and again, being sure to cover the entire surface in order to print the mountains on the lower portion of the paper. The study will then be finished with the exception of the sailing-vessel, which may be indicated with a few strokes. Bring the brush to a fine point and trace in ink the lines of Fig. 246. First make the central vertical line, then the slanting line on the right-hand side which joins the mast a short distance from the top, from the same point extend two lines down on the left. Fig. 247 is the hull of the vessel, and the straight line crossing it a short distance from the top denotes the narrow space to be left white. Fig. 248 shows the complete outline of the craft, intentionally made as simple as possible, to enable any girl to introduce the boat into the sketch without difficulty. As is seen in Fig.

Fig. 246.

Fig. 247.

Fig. 248.

244, the boat is filled in with black and duplicates itself in the shadow reflected on the water, but the shadow must be made with the brush; it cannot be printed from the boat.

Fig. 249.

The chrysalis of the

Ink Butterfly

(Fig. 249) was made of two or three ink-blots and a splash of ink from a paint-brush. This chrysalis did not in the least resemble a real one, but when the paper was folded along the edge of the ink a butterfly appeared.

Fig. 250.

On soft-finish paper write any word you choose; then, while the ink is wet, fold the paper, and upon opening it you will find

An Odd Design

Figs. 250 and 251 were made in this way; both from written words which represent most desirable states of mind. When you can gain Fig. 250 you will surely have Fig. 251.

Fig. 251.

The Fantastic Horses

(Fig. 252) gave no hint of what might be expected when they were first seen in the form of a group of shiny black spots, and it was only after opening the folded paper that they revealed their true character as extravaganza animals with legs different in length and extraordinary eyes.

You can make creatures wilder in appearance than these, and in this way form a collection of pictures of the animals you have never known.

Fig. 253 represents

A Pair of Birds

of a peculiar kind, found nowhere but inside ink-bottles. Others may come from the same source, but none will be precisely like these. Try the experiment of ink-drops on pieces of muslin; work rapidly and you will be delighted with the results.

Fig. 252.

Fig. 253.

If you are fond of

Nature Study

and happen to have vines or any other kind of house plants, you can make valuable ink sketches from them. Break off a few pieces of the main growth. Take one at a time, and with the left hand hold the spray either in the bright sunlight or lamplight in such a way as to cast a distinct clean shadow upon the paper pad that is placed beneath it. With a brush dipped into the ink, paint over the shadow; be careful to follow every turn and twist of leaf and stem, that the sketch may be true in every detail. You will find the work to be quick and easy and the results satisfactory. In no other

Fig. 254.

way can better characteristic growth of the various specimens be obtained. Notice carefully Fig. 254, and it will give a true idea of the plant; and Fig. 255, how naturally and gracefully the vine turns in curving lines. Fig. 256 gives sprigs from four different plants. Can you name them? All the studies are decorative and furnish original designs for embroidery, or wood-carving, but, best of all, you can make and use this kind of ink-pictures as illustrations for the book in which you write down your notes on Nature study, and so be able, after describing a plant, to give an original, realistic picture of it.

Fig. 255.

Fig. 256.

Small specimens can be painted with ink, root and all forming one picture, but larger plants must be separated at the centres and a study made of each part, the two halves being placed side by side on the same piece of paper.

CHAPTER X

MOVING TOYS

HOW would you like a merry-go-round with all the animals prancing one after another, each with a girl or a boy on its back, riding along regardless of the speed of the steed, like the real ones you have tried in the parks and at the sea-shore?

The Merry-go-round

Fig. 257, is easily made, the work consisting mostly of stringing different things on a hat-pin and sticking the pin through a box. Procure a long hat-pin (Fig. 258), a large, empty spool (Fig. 259), three small corks (Fig. 260) and, for a foundation, a round flat box if you can obtain or make it, if not, a common note-paper box must answer the purpose. A piece of string about a yard long and two shank buttons will help out the simple machinery (Fig. 259). The canopy is of paper or card-board (Fig. 261) and the support for the animals of card-board (Fig. 262).

Lay a piece of card-board flat and place over it an ordinary tea-plate; hold the plate steady and draw a circle on the card-board by running the lead-pencil around the edge of the plate. This will give a circle of about the desired size. Then draw bands across the circle, as in Fig. 262; to do this draw lines dividing the circle into quarters and at the

Fig. 257.

left of each of the four lines draw a line a little more than half an inch away from it, making four bands (Fig. 262).

Cut out the circle, then the four wedge-shaped pieces between the bands, and bend up the end of each band five-eighths of an inch (Fig. 262).

Fig. 258.

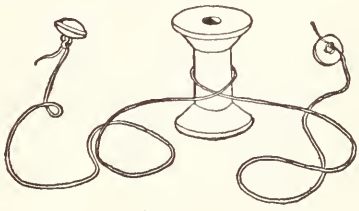


Fig. 259.

On these ends paste any stiff paper animals you may happen to have, (Fig. 263), selecting those which will balance each other, as the merry-go-round must revolve evenly. Colored scrap-book animals look well and are stiff enough to hold themselves firmly in place. Should you not happen to possess these, animals from old pamphlets, advertisements or newspapers may be used. They should be stiffened by being pasted flat on thin card-board or stiff paper. When fastening the animals on the merry-go-round paste the body of the animal to the turned-up end of the card-board band (Fig. 263).

In Making the Canopy

use a small saucer or bowl as a guide to draw the circle on paper or card-board. Cut out the circle, point it around the edge (Fig. 261), turn the points down and the canopy is ready to go on the hat-pin. If you do not have the correct-sized plate, saucer, or bowl, the circles may be drawn with the aid of a home-made compass. To make the compass, take a pair of scissors and a piece of card-board (Fig. 264), punch two holes about two inches apart in the card-board and through them pass the points of the scissors until they extend through on the other side an inch or a trifle more; secured in this way the scissors

Fig. 260.

make a very good compass. Adjust the scissors so that the distance between the two points is four inches, then firmly

Fig. 261.

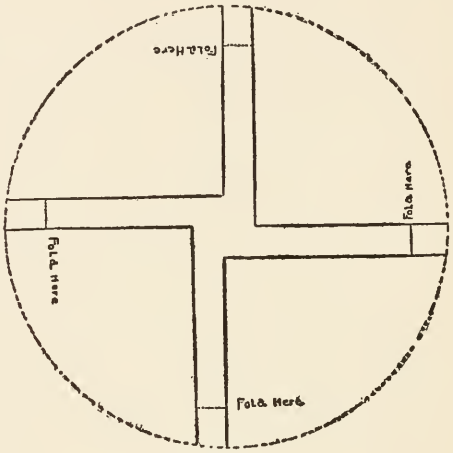


Fig. 262.

stick the sharper point in a piece of cardboard and, keeping that steady, slowly move the other point around in a circle, pressing it down only hard enough to scratch the surface (Fig. 264). Make the circle for the canopy in the same way, but have the distance between the scissor points much less—not more than two and one-fourth inches—in order to preserve the correct proportions.

Fig. 263.

Now watch the almost

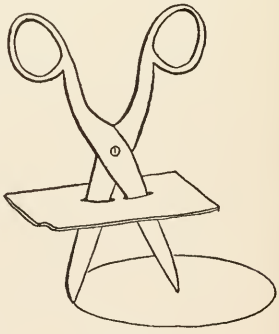


Fig. 264.

Magical Forming of the Merry-go-round

Pass the long hat-pin (Fig. 258) through the exact centre of the canopy (Fig. 261) then put on one of the corks (Fig. 260); work this up tight

to the canopy that it may hold the latter in place. Twist the cork around and around on the pin, as it will be apt to go on crooked if the pin be forced carelessly through the cork. String on another cork, working it up the pin midway, then slide on the bands, with the animals attached, pushing the pin through the exact centre of the pasteboard; next put on the large spool.

The Box Must Have Some Holes

made in it before using; puncture two one inch from the front edge and four inches apart in the lid; then make two more holes through both lid and box on the front side half an inch from the top and five inches apart, as seen in the illustration. Fig. 257.

Stick the loaded pin through the centre of the box-lid, bringing it well down, and cover the extreme point of the pin with the last cork in order to prevent the pin from coming through and pricking. This cork must lie firmly on the bottom of the inside of the box.

The merry-go-round is now ready for the machinery to set it in motion. Pass the string around the spool and cross the two ends in front (Fig. 259) keeping the ends crossed; thread one of the ends through the two holes on its own side of the box, bringing the end out from the front of the box, do the same with the other end of the string as shown in the illustration. To prevent the string from accidentally slipping back through the holes, tie a shank button on each of the ends.

Now, holding the box with one hand, gently

Pull One End of the String

with the other hand and see the animals go dancing around, just like the big wooden griffins, zebras, and giraffes on real carousals.

Of course, the merry-go-round needs boys and girls to ride the animals and enjoy the sport. Look them up in the advertisements of old magazines, newspapers, or wherever you can find paper young people. Cut them out neatly and let them take turns riding on the different animals. When cutting out the legs of the paper children, merely cut up a deep slit to divide the legs in order to make the riders cling firmly to the various animals.

The brighter the colors used in the merry-go-round the gayer and more attractive its appearance. There is

Something Very Fascinating

in the toy; even grown people are interested and amused as they watch it whiz around with its burden of happy little paper children. Another lively game for paper children is the

Flag Dance,

(Fig. 265), where each doll actually waves its own little paper flag as she dances to and fro.

Make four small flags of different colored tissue-paper, each 1½ inch wide and 3 inches long, which allows for fastening to the staff.

Four little paper girls can be cut from Fig. 266. Take four half-sheets of stiff, unruled white writing-paper, fold each lengthwise through the centre; then trace Fig. 266 and cut it out of an extra piece of paper. Lay this half figure with its straight edge on the fold of one of the papers and with a lead-pencil draw a line around it. Cut out and open (Fig. 267). Make four dolls. Cut the flag-staff off the right hand of two and off the left hand of the other two, that the hands on the outside of the group, when the dolls

are in place, may hold the flags (Fig. 268). Draw or paint a face and dress on each of the little girls, being sure to use the inside of the bend or fold for the front of the doll, as this slight inclination to fold forward after the doll is cut out and straightened out flat is of great assistance in bracing the figure when it is in position. Cut a slit up between the feet, but no further. Let the legs be of one piece, to insure greater strength to the standing doll (Fig. 267). Fold the flag-staff lengthwise, also the hand holding it, and give to each of the paper children one of the home-made tissue-paper flags by pasting a flag on every flag-staff (Fig. 268). When the dolls are ready, obtain a very flexible, slender, cloth-covered, long steel from a dress-waist or stays, and tie a strong black thread from end to end, making a stretch of nine or ten inches. On the centre of this thread tie another about a yard long (Fig. 265), and on the steel foundation fasten the four dolls. They should stand erect, one on each end, and two midway between centre and ends.

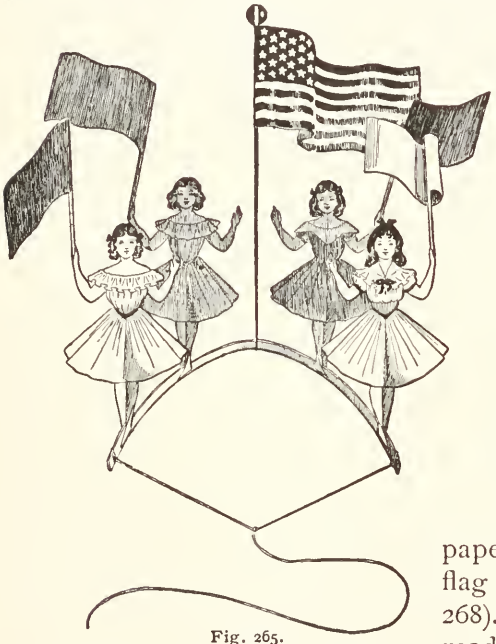


Fig. 265.

Fig. 268 shows the method of pasting the feet of the fig-

ures on the steel; slide the steel up between the feet; then bend them forward and glue one foot on each side of the steel, flat against it. Fasten a flag, about four and a half inches long, on the end of a long, strong hat-pin; then stick the pin firmly in a small pastry-board and slip the steel with its pretty children over it, resting the centre of the steel flat against the pin, which is now a flag-pole (Fig. 265).

Fig. 266.

Take hold of the loose end of the thread and step back from the table on which the dolls are placed. When a sufficient distance away to cause the thread to stretch out straight give it a number of gentle jerks in quick succession. This will cause all the paper children to rush back and forth, waving their bright flags in triumph.

They can enter more heartily into the play if there is music, and it gives life to the "flag dance." Ask your companion to strike up the "Star-Spangled Banner" on a comb while you make the little paper children dance in time to the music, which you can do by jerking the thread to the musical rhythm.

Fig. 267.

Find three large-sized button-moulds and some burnt matches for your

Button-mould Tops

Select round matches, as they will fit the holes in the button-moulds. Place one mould flat down on a piece of orange-

The Dance of the Dolls.

colored paper and draw a line on the paper around its edge. Cut out the circular paper and paste it on the flat side of the button-mould; then pierce a hole through its surface, exactly over the hole in the mould, slide a match, unburnt end first, through the mould, until it extends about one-third beyond the bottom of the mould. If the match does not seem firm, fasten it in place with a little mucilage. When this top is finished, make two more of the same size, one covered with red and the other with green paper. No string is necessary for spinning these tops; merely give each one a twist with the thumb and second finger of the right hand and around it goes.

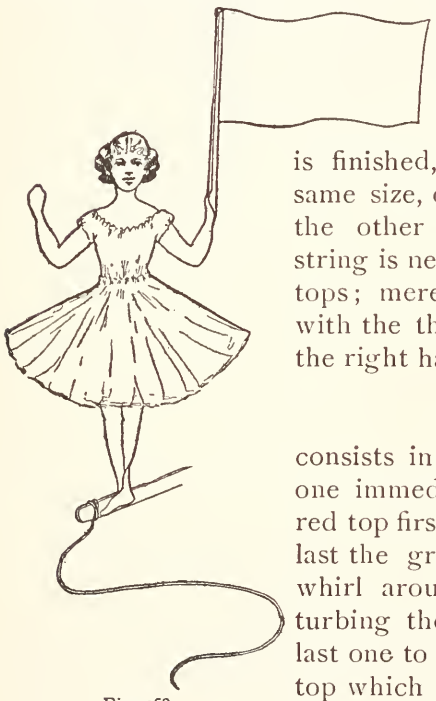


Fig. 268.

The Game

consists in spinning the three tops, one immediately after the other, the red top first, then the orange one, and last the green, allowing them all to whirl around together and not disturbing them in any way until the last one to cease spinning falls. The top which keeps up for the longest time scores the first point. When the first round is finished set the tops twirling again, commencing with the orange one and taking the red one last. Mark down the score of the winning top and give them all a third and last trial, leading with the green top and bringing in the orange last. The top which gains the greatest

number of point wins the game. Should each top gain a point, the game would be a "tie," and necessitate the playing of it all over again.

In case two friends would like to join in the sport, the game may be changed. Let each, with closed eyes, select a top, leaving one for the hostess. At a given signal have all the tops spin at once. The top which stands up longest wins the first point, and the greatest number of points the game. Allow two rounds, making six points to each three-handed game.

CHAPTER XI

HOME-MADE PYROTECHNICS

IF YOU would like some bright, lively fireworks, the kind you can manufacture at home, make them the day before the celebration, and there will be no necessity of waiting all the long hours until dark before seeing the sparks fly. Begin the fun early the next morning, and fire off these queer fireworks the entire day. The

Three-story Red, White, and Blue Pin-wheel

is very satisfactory, affording three times the enjoyment of a simple one-story affair. Fold a three-inch square of stiff red paper diagonally across from corner to corner, making two folds, which cross at the centre of the paper. Unfold and cut the square along the folds almost to the centre (Fig. 269); then pierce the alternating corner flaps with a long, stiff hat-pin, allowing each point threaded on the pin to remain there; run the pin through the centre of the paper (Fig. 270) and shove the red pin-wheel up close to the large round head of the hat-pin. Push a small cork on also, to prevent the pin-wheel from slipping. Work up another

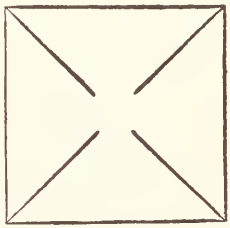


Fig. 269.

cork on the pin, about an inch or so below the first one; then make a larger pin-wheel of white paper and slide it on the same hat-pin, holding it in place with a third cork. Cut the last pin-wheel still larger and make it of blue paper. Shove up a fourth cork on the pin, and below, against it, thread on the blue pin-wheel. No cork will be required under the last pin-wheel; the hat-pin being now pushed firmly into the end of a stick, the blue pin-wheel cannot slide out of place (Fig. 271). When ready, run with the toy, or whirl rapidly around, holding it in your hand, and see how beautifully the three parts spin, the whole appearing like a whirling red, white, and blue pyramid.

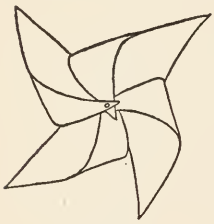


Fig. 270.

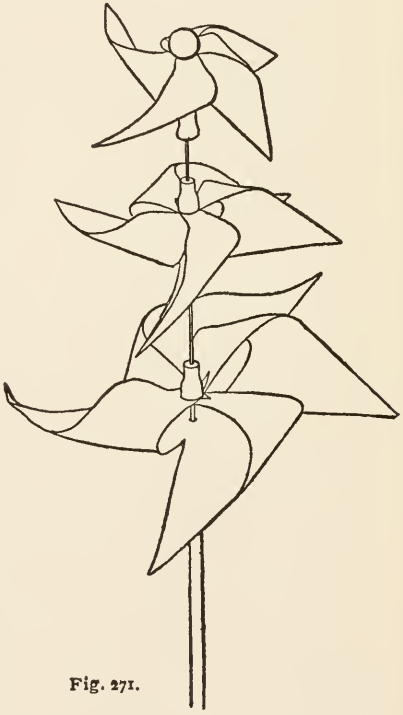


Fig. 271.

Another

Pin-wheel in Your Hands

has a button as a foundation. Take a large cup and trace two circles on yellow paper measuring three and a half inches in diameter; make two smaller circles of red paper, two still smaller of green paper, two others—decreasing in size—of yellow paper, and the two smallest circles of blue paper (Fig. 272). Separate the disks into two groups exactly

alike; then fasten each of the two sets of disks together by placing one over another; they will form two vari-colored disks, each a duplication of the other. Select a large button and place it between two vari-colored disks. Be sure to have it in the centre; then with a large pin or needle punch two holes through the disks, covering the corresponding opposite holes in the button. Thread a string through the two holes and tie the ends together (Fig. 273); join the edges of the two disks and the pin-wheel will be ready for action. Place the first two fingers of the right hand in one loop, and of the left hand in the other; give the string a twirl and pull the hands apart. The motion causes the string to twist, allowing the hands to come nearer together; another outward motion of the hands and the pin-wheel will revolve rapidly in another direction. By alternately bringing the hands together and pulling them apart, the pin-wheel can be kept spinning as long as you like. In making the pin-wheel, the paper may be either pasted or sewed; it is firmer when pasted.

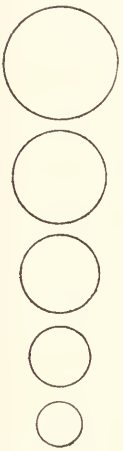


Fig. 272.

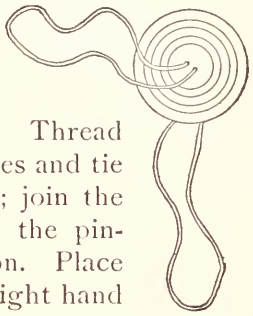


Fig. 273.

Pin-wheels on the Fence

are fiery, sparkling, and larger than the hand pin-wheels. Find a large-sized empty spool (Fig. 274) for a foundation; then cut a circular pasteboard disk four inches in diameter for the back of the pin-wheel (Fig. 275). Make blue fire of strips of fringed-out bright-blue paper (Fig. 276) and paste them across each other on the disk (Fig. 277). Cut a square

of yellow paper fringed around the edges for the yellow fire and fasten it over the blue fire. Make red fire of a circle of fringed red paper (Fig. 278) a trifle smaller than the yellow, that the yellow fire may be seen surrounding the red and the blue stand out beyond the yellow. Each succeeding layer of fire must be smaller, though not necessarily of the same shape as the last. The uneven, straggling ends add to the effect when the pin-wheel is in motion. Let the last two papers be white and green and on the top fasten irregular lengths of the thread-like tinsel left from your Christmas-tree decorations. Do not bunch it too much; have the tinsel string out long in various directions, so it will look like dropping flying sparks when you fire off the pin-wheel. If you have no tinsel, finely cut stands of gold-paper may take its place. Paste the back of the pin-wheel securely on one end of the empty spool. When finished it should resemble Fig. 279. Select a strong wire nail and push it through a small disk of inked pasteboard (Fig. 280); bring the pasteboard up close to the head of the nail, then

Fig. 274.

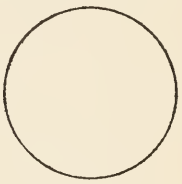


Fig. 275.

Fig. 276.

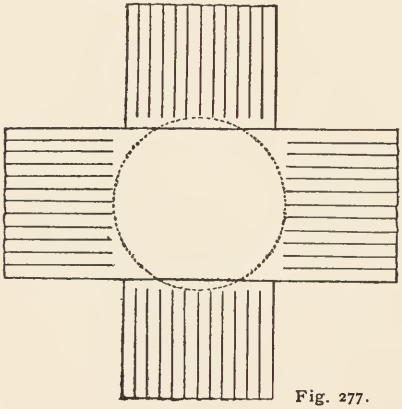


Fig. 277.

pierce the pin-wheel in the centre and run the nail through both wheel and spool. The little black card-board prevents the pin-wheel from slipping off the nail. After the paste or glue has dried, hammer the nail which is in the pin-wheel upon the fence and set the firework

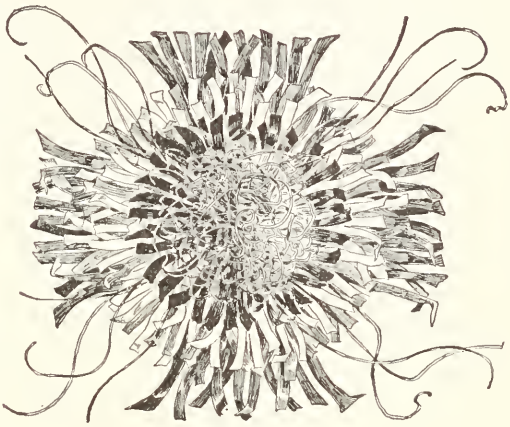


Fig. 279.

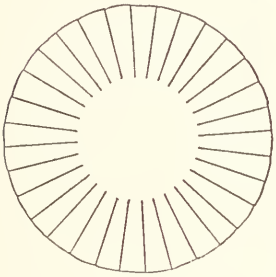


Fig. 278.

off by means of a strong string placed over the spool with the ends crossed (Fig. 281). By holding the two ends of the string, one in each hand, and rapidly pulling first one, then the other, the pin-wheel will revolve so fast that it might be mistaken for one of actual fire, but unlike the real one there is no likelihood of the paper wheel turning black and falling to the ground.

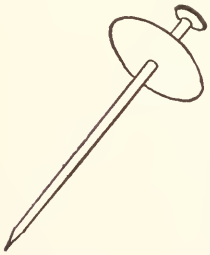


Fig. 280.

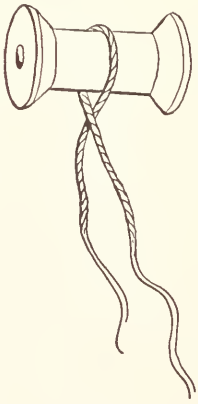


Fig. 281.

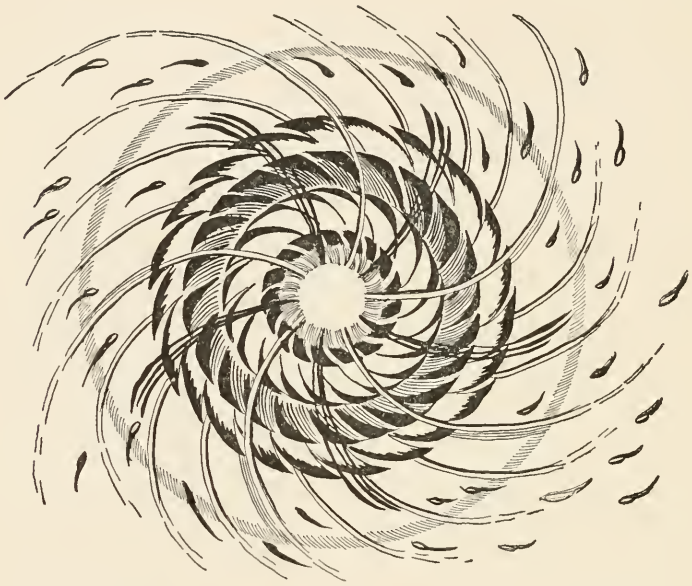


Fig. 282.

Yours will spin as long and as often as you like, losing none of its brilliancy (Fig. 282).

The Sparkling Calumet

is fascinating. Its bright sparks fly up and out in every direction all over your head, hair, and clothing, but they do no harm. Take a strip of stiff paper three and a half inches wide and eleven inches long; cut a hole in one end (Fig.

Fig. 283.

283) and paste the two lengthwise edges together, forming a hollow tube; then pin up the open end nearest the hole (Fig. 284). Cut Fig. 285, making it about four inches across at the widest point; slash the lower

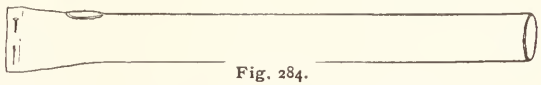


Fig. 284.

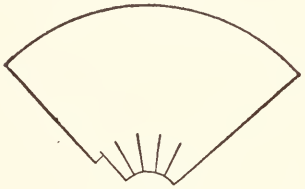


Fig. 285.

edge and pin this pipe-bowl in funnel shape by bringing the two sides together (Fig. 286); fasten it on the tube over the hole in the top by gluing the flaps down on the pipe-stem (Fig. 287). Half-fill the pipe-bowl with brilliantly colored bits of paper, including scraps of gold and silver tinsel cut very small. In this way pieces too little for anything else can be utilized. Make a good supply so that you

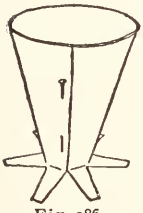


Fig. 286.

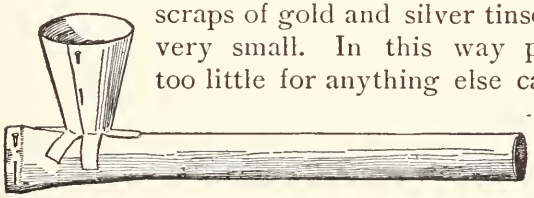


Fig. 287.

Fig. 288.

may fire off the calumet many times. Place the open end of the tube to your lips and blow (Fig. 288).

It will not take more than five minutes to make the

Roman Candle

Cut a piece of paper about ten inches long and seven inches wide, roll it up and slip a small elastic over the roll to hold the Roman candle in shape; carefully fold in one end of the roll (Fig. 289); then collect all of the scraps of bright-colored paper and bits of tinsel for sparks (Fig. 290). When the sparks are ready load the candle by filling it with them. Hold the candle in one hand and gayly swing it around like a real Roman candle. In what a dazzling circle the bright paper sparks fly! No matter if they do scatter all around, they may be gathered up and used again.

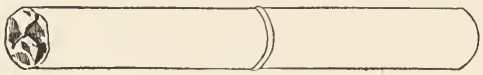


Fig. 289.

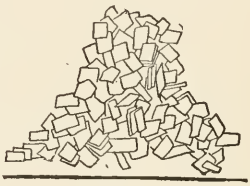


Fig. 290.

If you can find a side-steel taken from a dress-stay, use it for a

Snap-fire

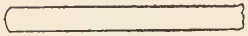


Fig. 291.

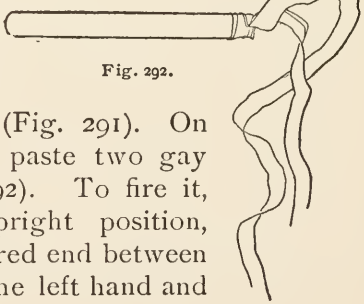


Fig. 292.

Bend the ends together until it breaks at the centre (Fig. 291). On the broken end of one piece paste two gay tissue-paper streamers (Fig. 292). To fire it, hold the firework in an upright position, streamers downward, the papered end between the thumb and forefinger of the left hand and

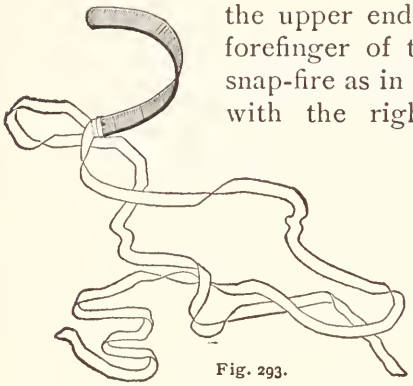


Fig. 293.

the upper end held with the thumb and forefinger of the right hand. Bend the snap-fire as in Fig. 293. Let go suddenly with the right hand, then an instant later with the left, and see the firework spring up high in the air, carrying its gay trimmings with it.

Just wait until you make the

Rushing Comet

and send it flying through the air, with its long tail sweeping out behind. How heartily you will laugh when it strikes its round head against some object which drives it flying backward.

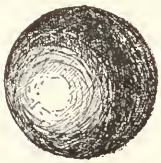


Fig. 294.

A rubber ball about three inches in diameter will make a good comet's head (Fig. 294). Cut two strips of bright red tissue-paper, each four inches wide, the entire length of the sheet, and paste the two pieces together, forming a long paper ribbon (Fig. 295); fold this once near the centre

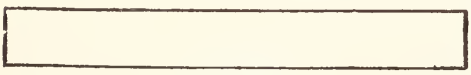


Fig. 295.

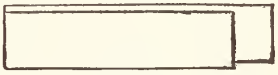


Fig. 296.

(Fig. 296); fold again, bringing the lower folded end up to the first end (Fig. 297), then cut the paper in a fringe, making the strands half an inch wide; begin at the folded end and cut through all the layers up to the single layer of paper (Fig. 298). Unfold and you will have Fig. 299.

Fasten this tail on the ball with strong paste (Fig. 300). In the same manner cut another long fringe of bright-blue tissue-paper; fasten it on the ball partly beyond and partly overlapping the red paper. Make a third fringe of orange-colored tissue-paper, and glue that also on the comet's head. Gather up the tail carefully so it will not tangle and set the ball aside until it is perfectly dry; then run out in the sunshine with the comet in your arms and throw it up as far as you can toward the blue sky. The comet will look gorgeous sailing through the air. When it comes down, take the ball up again and throw it as far in front of you as possible. Away it will speed with a flutter and a dash, a long, brilliant streak of color (Fig. 301). The tail of the comet can be made longer by using three instead of two lengths of the paper.

Fig. 297.

Fig. 298.

Fig. 299.

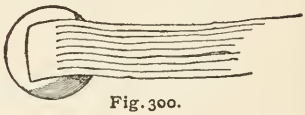


Fig. 300.

Fig. 301.

Now we will make

The Pistol

of any firm, strong, hollow cylinder. A slender pasteboard mailing tube, or a stick of bamboo, or a section of some shrub from which you can push the pith, leaving a hollow case, will answer the purpose. Have the hollow stick about eight inches

long, and for a ramrod cut a smooth, round stick an inch or two longer. Be sure that the ramrod slides easily through the tube while fitting snugly. Fig. 302 shows the ramrod in the pistol. Get a large raw potato and cut off several thick slices to use for bullets. Punch a slice with one end of the pistol, then with the other, leaving the potato bullets in it exactly as they came from the slice. When you are ready to fire, place the ramrod against the bullet in one end of the pistol and suddenly push the ramrod with force through the tube, sending the first bullet flying, and as it leaves the pistol a loud report will follow. Fig. 303 shows the potato slice and the bullets which have been used. Should you be able to find corks which exactly fit the pistol you could use them instead of potato. Fasten each cork to the end of a string and tie the string firmly around the centre of the pistol. Remember that the success of the pistol depends upon keeping the air bottled up tight in the tube by having the bullets fit tight. If the air is allowed to escape, no report will be heard; the bullets will not pop. But never fear; you will be able to make the pistol; have confidence, patience, and care, and your work will turn out well.

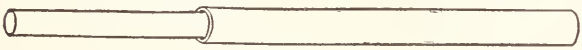


Fig. 302.

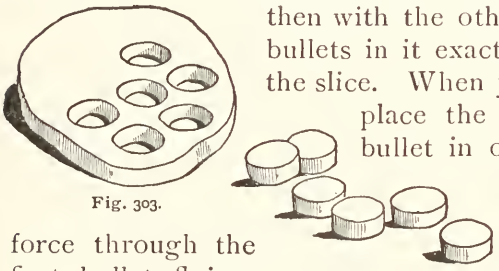


Fig. 303.

Sky-rockets

are one of the best kind of fireworks and furnish lots of fun. We will make some and send them flying through the air.

Cut strips of paper eighteen inches long and two inches wide, fringing them seven inches on one side (Fig. 304). Commence at the unfringed end, B, and roll them like lamplighters (Fig. 305), folding each over at top end to keep it in place (Fig. 306, C). These are the sky-rockets, and are best made of stiff, bright-colored paper, but may be of any kind except very limber paper. Make a number of sky-rockets and "fire them off" by the aid of a large, empty spool with a piece of elastic adjusted loosely over one end, but tied securely (Fig. 307). Place one sky-rocket at a time through the hole in the spool, fringed end out, and, grasping the tip end in the elastic (Fig. 308), pull the sky-rocket toward you and let it fly back as you would send an arrow from a bow. There is another paper sky-rocket which rivals a real one in brilliancy, and is much easier to fire. Make the rocket of a hollow stick—a bamboo handle from a Japanese fan or parasol, or an old dried sunflower stalk will do—and cut the stick about seven inches long. Near one end tie on firmly a stout rubber band (Fig. 309). The stick of the sky-rocket should be strong and slender and about twelve inches in length. Have it small enough

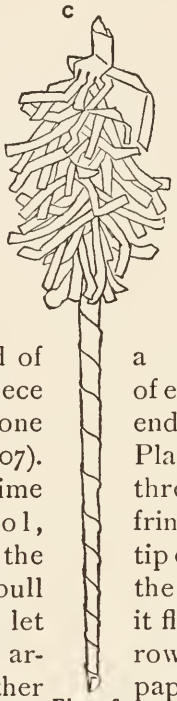


Fig. 306.

Fig. 304.

Fig. 305.

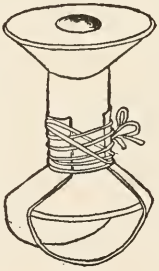


Fig. 307.

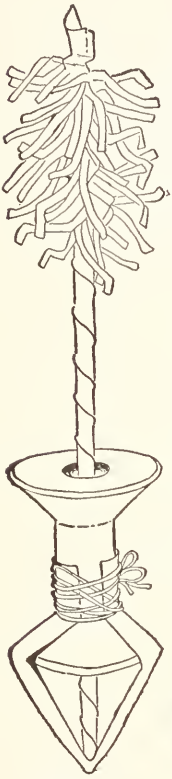


Fig. 308.

in diameter to slide easily through the sunflower stalk. Fasten many gay-colored streamers of tissue-paper on one end, making them

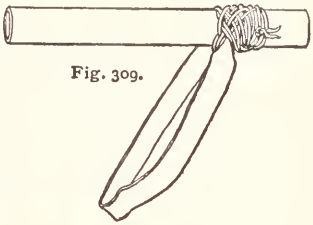


Fig. 309.

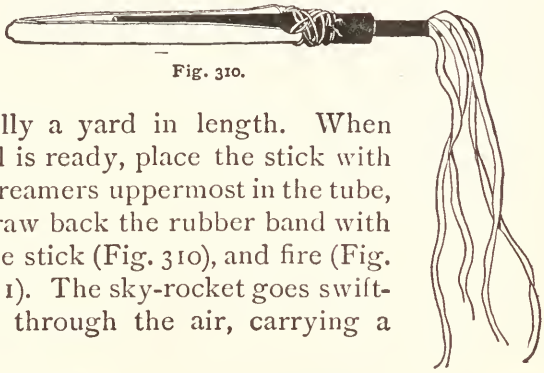


Fig. 310.

fully a yard in length. When all is ready, place the stick with streamers uppermost in the tube, draw back the rubber band with the stick (Fig. 310), and fire (Fig. 311). The sky-rocket goes swiftly through the air, carrying a

Fig. 311.

stream of paper fire in its wake. As with the real fireworks you must be careful not to aim any of these in a direction where they will strike anyone.

CHAPTER XII

MONOTYPES

HEY are charming, these monotypes; charming in effect when finished, delightful in their accidental results, and wholly fascinating in the method, or lack of method, used in their production. Painted with a bristle brush, a camel's-hair brush, a sponge, a rag or your thumb, as the case may require; painted on glass and then printed on paper, with a clothes-wringer for a printing-press; can anything be more enchantingly unconventional? Yet the finished monotypes are truly artistic and beautiful. If you can paint at all, be it ever so little, you can make some kind of a monotype, and you will always have the feeling that you can do better next time. The

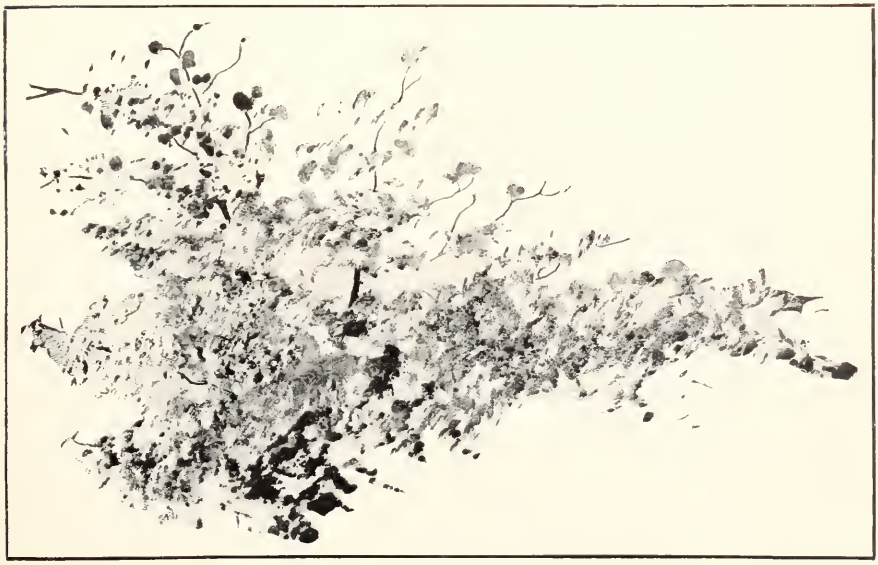
Materials

for your work are a piece of glass about six inches square, a tube of lamp-black oil-paint, some sewing-machine oil, and a pad of unruled writing-paper.

See that your glass is perfectly clean and free from dust, squeeze out some of the black paint in a saucer and mix it

Soft Clouds.

Can be made with a cloth on the end of your finger.



Foliage Effect.

Made with a sponge.

The Distant City.

Printed on Unruled Writing-paper.

with a few drops of the machine oil. You will soon learn the consistency required, for if you make the paint too thin it will run and blot, and if there is not enough oil it will go on too thickly and smudge in printing.

The Painting

Choose a photograph or print for your copy which is simple in effect—that is, one which shows a good deal of sky and broad stretches of light and shade. It may be either landscape or marine, but, until you have had some experience with the work, avoid figure pieces, and architecture. When you have learned the process be as original as you like, but keep to your copy at first; you will never make an exact reproduction. Use whatever kind of a paint-brush seems best fitted, and work rapidly that the paint may not dry. A fine soft sponge will give excellent foliage effects; this should be dipped in the paint and simply dabbed on the glass. A clean cotton rag will take off extra paint and is especially useful where water is represented in the picture. By dragging the rag or sponge over a surface too thickly painted you can loosen it and give the appearance of grass and shrubbery, or of a roadway. Soft clouds can be made by putting the cloth over the end of your finger and rubbing on the glass with a circular movement, using but little paint; for an ordinary sky make horizontal strokes with the rag, keeping the tint as flat as possible. If you place a piece of white paper under the glass the work will be easier, for you will appear to be painting on a white surface and the transparency of the glass will not trouble you.

If you have ever painted

Heads,

sooner or later you will long to try one with this process. A woman's head with flowing, wind-blown hair seems

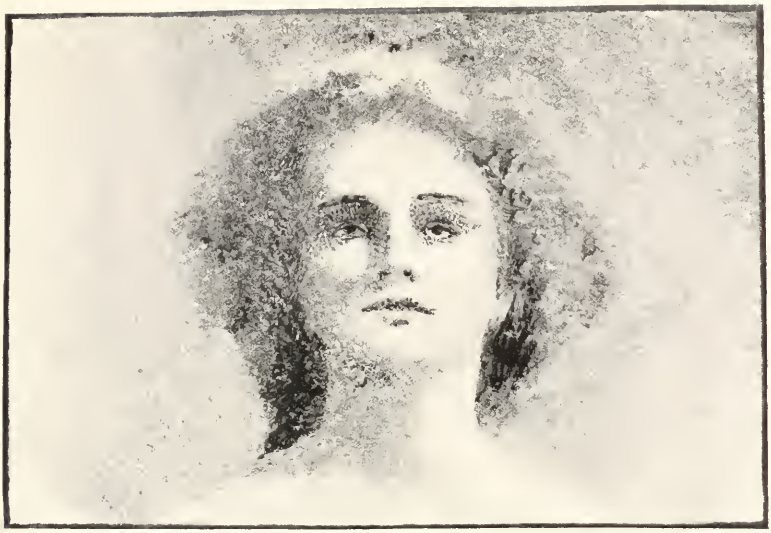
especially adapted to the work. A bristle brush and the ever-useful rag will spin the hair out, and toss it about in decorative masses. For the face you will need a small pad made of soft silk, or muslin, and raw cotton—indeed, several pads will be found useful. Cut the silk into a four-inch square, place in the centre a wad of raw cotton about the size of a hickory nut, and, drawing the silk smoothly over the cotton at the bottom, bring it together at the top; wrap with thread close to the cotton and tie securely.

Draw the outlines of the face lightly with a fine camel's-hair brush, and lay in the shadows broadly with a large brush; then take your pad and go over the shadows, stippling them with little dabs until they are smooth and free from brush strokes. When it is necessary to deepen a shadow add more paint with the pad.

Do not put in the features with hard lines, let the face be modelled with light and shade, making deeper accents where more sharpness is required. The definite strokes about the eyes, the nostrils, and the line between the lips can be made with a brush without hardness. Hard lines never look well in a monotype; they stand out harshly from the general softness of the effect, and appear unpleasantly out of place.

The Printing

When your painting is finished, slightly dampen a piece of paper by passing a wet sponge across one side, lay the dampened side carefully on the glass next to the paint, and then pass both through the clothes-wringer. Remember to hold the glass as it comes through that it may not fall and break. Lift your paper off lightly and quickly, without dragging, and you have the completed monotype, like, and yet unlike, the picture you painted. In the first place, the



Study of a Head.
Printed on Imported Blotting-paper.

Study of a Head.
Printed on Imported Blotting-paper.

The Turbulent Sea.

Printed on Imported Blotting-paper.

design is reversed, and then there are often beautiful effects which your brush could never have produced. If the painting on the glass still holds, try another print, and even a third ; the first are not always the best.

When no more impressions can be taken, wipe the paint from the glass with a cloth and begin another picture.

Monotone Monotypes

A very pretty experiment is to use color instead of black and make a monotone of your monotype. Sepia will give the picture in soft brown, Indian red in bright red, while Antwerp blue produces the tone of blue found in a blue-print photograph. Of course oil colors alone must be used, water colors will not print.

Another Field for Experiment

lies in using several colors in one picture. For instance, you might make your mountains blue, your trees green, and your foreground red and yellow.

Then again mixing the colors and using them as if painting on canvas will prove interesting. The deepest pleasure in all work of this kind is to experiment and discover methods for ourselves, then to work out and perfect these methods and make them all our own.

There are various

Papers

suitable for monotype painting. Rice-paper is especially pleasing; it is soft of texture, light of weight, and has a warm, creamy tone. The monotypes printed upon it are delicate, clear, and distinct. Imported blotting-paper also produces satisfactory results, though the print is not quite

as soft in effect; it has a smooth, rather hard surface, but takes the paint well. Both of these papers are used dry.

Some professionals use a Japan paper and a Holland paper. The Japan paper is very thin, and the Holland paper has a surface like water-color paper, but is heavier than the ordinary kind.

For first efforts the unruled, ten-cent writing pad is the best. Very good prints can be made on this, and one feels free to experiment as much as heart desires with such inexpensive material. The monotypes given here were painted on writing-paper and imported blotting-paper.

Early Spring.

Printed on Unruled Writing-paper.

Florida Coast.

Printed on Imported Blotting-paper.

CHAPTER XIII

PRISCILLA RUGS

AS THERE is no limit to the beautiful effects which may be produced by the well-chosen color combination in the Priscilla rag rugs, and anyone who has an eye for color (which, by the way, may be cultivated) is sure of success.

There are many new inventions in hand-looms, yet the old cumbersome loom of our grandmother's day is still to be found in the outlying districts of most towns and cities, and the weaving done on this is fully as satisfactory as that on the new looms. Almost every village has its rag-carpet weaver, and on his old-fashioned machine can be woven all that we want in this line.

First, there are the all-wool rugs for general use in the house, then mixed wool and cotton rugs for the piazza, all cotton for bedroom and bathroom, mixed cotton and silk and entire silk for portières and couch-covers, and for covers for sofa-pillows.

There are also rugs of heavy cotton, such as denim in its dull reds, blues, yellows, greens, and browns.

The size of a rug for general use is usually one yard wide by two yards long, the yard width being the limit of the ordinary loom. Smaller rugs are woven in different proportions: a runner for the hall is three-quarters of a yard wide and of any required length, and door-mats half a yard wide by one yard long. Squares for the centre of the room can be made by having two breadths woven exactly alike and then sewing them together.

You who possess a loom of even the clumsiest design have a field open before you full of interest, for freedom to experiment in pattern and manner of weaving will lead to continually new results and there will be increasing originality and beauty in your productions.

Color Schemes for Rugs

Collect all your available material, plan your combination of colors, and then decide whether it will be necessary to put some of the rags into the dye-pot. If you have a handsome vase in your room it is a pretty idea to take that for your keynote and reproduce its color in your rugs.

Solid colors are the best unless you wish to have part of your rug what is called "hit or miss" For "hit or miss" any short pieces may be used and sewed together indiscriminately; then again, if you have a good deal of checked, plaid, or mingled material, it may be used by itself for centre or border. It is upon the solid colors, however, that you must principally rely, as there is less of the element of chance in their use, and your calculation as to the result of your color combination will be surer.

A favorite design is a "hit or miss," or a solid-colored

Making a Priscilla Rug.

centre with striped ends. A more unconventional effect is produced by making the rug in stripes of unequal width and in daring color combinations; some of these latter are startlingly barbaric and artistic in appearance and are well adapted to studio use. Again, more harmonious effects are produced by using various tints and shades of one color. Very narrow stripes of black and of white often separate wide stripes of different colors, sometimes singly, sometimes together, and when used with discretion they give a certain decision and finish to the whole. You will naturally want to exercise your own taste and originality in designing your rugs, so a description of one all-wool rug will be amply sufficient as a guide.

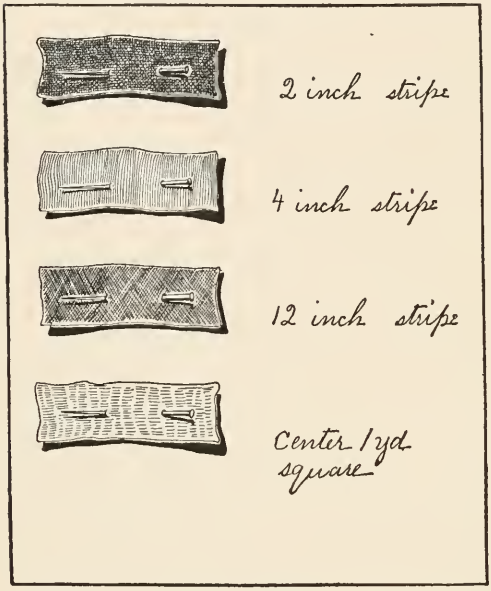
This rug is one yard wide by two yards long. The centre is exactly one yard square and is of solid dark cardinal red. The two ends are precisely the same and the stripes of the border follow each other in this order: Next the centre comes a very narrow stripe of old gold, then one of the same width of white. These are made by putting the strips of color only once through the loom, or once across. After these comes a five-inch stripe of old blue, again the narrow yellow and white stripes followed by a two-inch stripe of moss green, a three-inch stripe of dull light blue, a five-inch stripe of light brown, a two-inch stripe of old blue, and next the fringe a one-inch stripe of dark cardinal red. The fringe is simply the warp allowed to extend beyond the rug about a quarter of a yard at each end.

Gray is a useful color in all-wool rugs and makes an effective centre for a bright-colored border.

The Fire Rug

is a beautiful blending of reds and yellows giving a flame color. The ends are dark red, and, by degrees, the red runs

into orange, which, in turn, melts into dark yellow, growing gradually lighter until the centre of the rug is a pale, soft yellow.



Tack on a Piece of Paper Samples of the Rags Used.

Pale tones of yellows and greens are sometimes combined, also yellows and browns.

Before taking your rug to the loom tack on a piece of paper samples of the rags used in the order in which you wish them woven, and write opposite each sample the width the stripe is to be made, as shown in diagram. Give this to the weaver that no mistakes may be made by him in the placing of the colors.

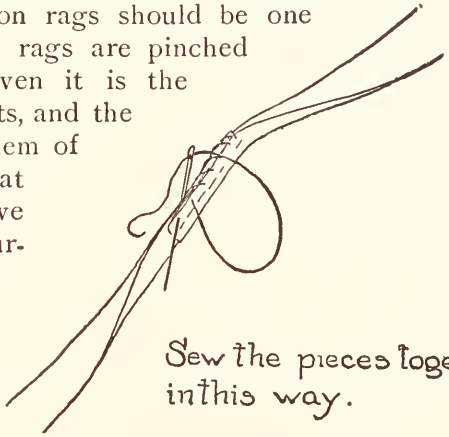
The Weight

To calculate how much you will need of each color, remember that it requires about two pounds of woollen rags to the yard; therefore, if you want half a yard of one color, one pound will be required; for a quarter of a yard, one-half pound. Do not make your calculations too closely, with a little over-weight in each case no harm is done and it is better than falling short of the required amount. The nar-

row, or once-across, stripes require an inch or two over the yard for each stripe.

How to Cut and Sew the Rags

Cut your rags in strips one-half an inch wide unless the material is very thin or loosely woven, in which case make them wider; very heavy cloth should be even narrower than the half-inch. Cotton rags should be one inch wide. As the rags are pinched together when woven it is the thickness that counts, and the object is to keep them of an even bulk so that the rug may not have an uneven, lumpy surface. Perhaps you will be told by the weaver not to sew your rags too securely, for they cannot be jerked apart readily when it is necessary to break off one color to begin weaving the next; but do not act on such advice. You must sew the strips together with care so that the ends may not stand out and give a ragged look to the finished rug. The accompanying diagram shows the best manner of joining the pieces. You see that one piece is laid over the end of the other, then both are folded lengthwise and sewed securely in the fold. This gives smooth joints and an even surface.



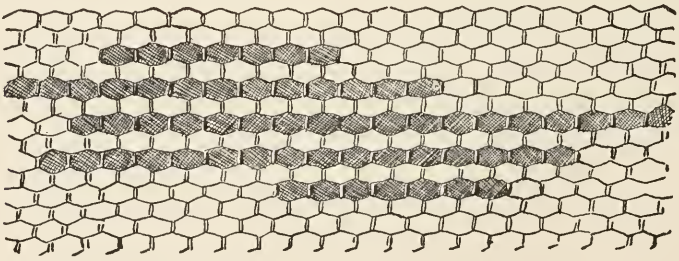
Wind your different colors into balls, having, as a rule, one pound in each, and put them in a bag to send to the loom.

Cotton and Wool Rugs

For piazza rugs, or for summer cottage use, cotton may be mixed with the wool; indeed, some hold that it is unnecessary to have all-wool for any purpose, though the writer thinks differently. The temptation is great, however, to use the pretty bits of gingham and lawn left from summer gowns, and they do give a certain, if not lasting, brilliancy to the rug. That much of the cotton is apt to fade and grow shiny with use is of little consequence when the rugs are not subjected to hard and constant use. Rugs of this class should be as bright and gay as possible; the combination of even the crudest colors looks well on a vine-shaded piazza and in the gayly decked summer cottage.

All-cotton Rugs

For bedroom and bathroom all-cotton rugs are exceedingly pretty and appropriate, and when they are made of



The Centre may have Dashes of Color through it.

fast-colored material they may be washed with ease and kept always fresh and clean.

White should predominate in these washable rugs, and the best as well as the simplest effect is produced by com-

In Stripes of Unequal Width.

bining it with but one other color. Indigo blue and turkey red are safe and useful colors; brown and green gingham also look well with the white. Of cotton rags allow one and one-half pounds to the yard. When you are in doubt as to the permanency of your colors soak the rug, before washing, in a strong solution of salt and water; this will "set" almost any color. These cotton rugs may be woven in alternate strips of color and white, or the white be used for the centre and the colors for the border, or the centre may have dashes of color through it as shown in diagram.

Bathroom rugs can be entirely of white or, towel-fashion, have a narrow colored strip at each end. Any white cotton may be used in these bathroom rugs, old being better for this purpose than new, as it is much softer.

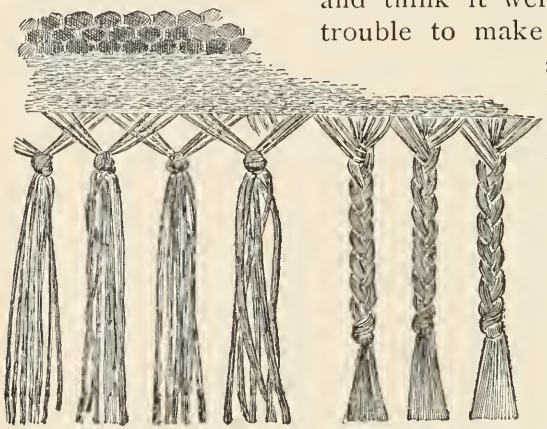
Warps and Fringe

Gray linen is undoubtedly the best-wearing warp and harmonizes with all colors, therefore for all-wool rugs it is the best. It gives, of course, a gray fringe, but that is not undesirable. When a colored fringe is wanted the cotton warp will have to be used. This comes in red, blue, purple, yellow, and white. Use cotton warp for cotton rugs, and where the filling is largely white the warp should be white also. When red warp is used with white filling a pink tone is the result, while blue and purple with white filling produce a gray effect.

At each end of the rug the warp should be woven with self-filling to the depth of one inch. This makes a heading for the fringe and prevents the rag filling from ravelling. It is, in fact, a selvage. You may knot the fringe, using six strands to a knot, or plat it and then knot as in diagram, or it may be stitched at the top and left to flow freely.

Dyeing the Cloth

Those who make a business of manufacturing rag rugs scorn to use the dyes that come ready prepared and think it well worth the extra trouble to make their dyes themselves. So it is, perhaps, when one has plenty of time to devote to the work, but a girl's life is so full of interests and occupation she generally chooses quick methods, though the results may not always be as lasting.

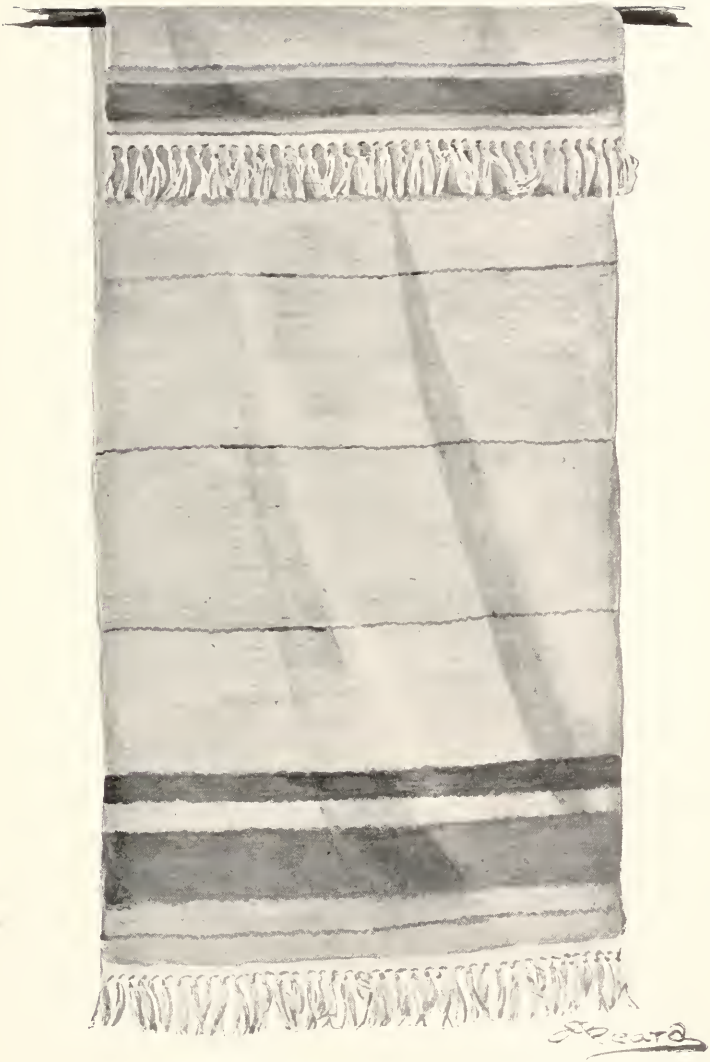


You may Knot the Fringe or Plat it and Knot it.

In case your heart yearns toward the old-fashioned process and you want to go into the work thoroughly, read the recipes given here and follow them carefully. They are taken from an old manuscript recipe-book, yellow with age and worn by use, which has descended to the writer from an ancestress famous for her good housekeeping and housewifely arts. The dye appears to have been prepared in large quantities, usually enough for sixteen pounds of wool, but you can easily regulate the proportion of the ingredients and make as much or as little as you want.

Wool Dyes

Navy Blue.—"Boil in a sufficient quantity of water twelve ounces of copperas, three ounces of alum, one and one-half



Some of the Portieres are Woven in this Style. .

ounces of verdigris, one and one-half ounces of cream-tartar. Run * your cloth in it for four hours, then air. Empty out that liquor and fill up with clear water; add four and one-half pounds of logwood, boil it for one hour and a half, then add six ounces of madder and boil for half an hour, then run your cloth for half an hour. Air it (the cloth), then add six ounces of blue vitriol and three ounces of pearl-ash. Mix it well and run your cloth in it for twenty minutes, then air and rinse it.

Silver Gray.—"On one pound of woollen: Take two ounces of sumac and three ounces of logwood and boil for one hour in four gallons of water, then add one-half ounce of cream-tartar. Put in your woollen for one hour, then take out and air. Refresh your dye with water and add one-half ounce of copperas, bring it to a boil and run your woollen for half an hour, then air, rinse, and dry it.

Yellow.—"On woollen for one pound: Dissolve in four gallons of boiling water three ounces of alum and one ounce of cream-tartar, then run your cloth for one hour and a half at boiling heat. Take out, cool, and rinse, then boil one pound of fustic chips for five hours, run your cloth, while boiling, for one hour, then cool, rinse, and dry it.

Madder Red.—"On one pound of woollen: Boil five gallons of water in a kettle, add three ounces of powdered alum and one ounce of cream-tartar, then run your woollen in it for two hours, rinse and air it. Put five gallons of fresh water in a kettle, add eight ounces of madder, mix it well and bring it to the boil, then run your woollen for one hour, but it must boil only five minutes. Take it out, air and rinse it. Add to the dye one-half pint of clear lime-water, then run

* To "run" means to leave the cloth in the dye, moving and stirring it about occasionally that the dye may be evenly distributed.

your woollen for ten minutes, then take it out and rinse it immediately.

Cotton Dyes

Brown.—"On cotton for five pounds: Bring eight gallons of water to the boil and add four ounces of pearl-ash, dip your yarn (or cloth) for half an hour and then wring out. Take twenty gallons of water and one bushel of maple or white-oak bark, boil it two hours, then take out the bark and strain the liquor and add one pound of copperas; stir it until it is dissolved and let your liquor cool to lukewarm. Dip your yarn for five minutes, wring and air it; dip again for fifteen minutes, wring and dip again until you have it dark enough.

Purple.—"On cotton for two pounds: Boil four ounces of sumac in four gallons of water, then dip your yarn for half an hour; wring, air, and put it in again over night, then take out and wring. Boil in seven gallons of water one pound four ounces of logwood for one hour; take three gallons of the logwood liquor and dip your yarn in it for twenty minutes, then add three quarts of the logwood liquor and dip for twenty minutes, then put in the remainder and dip for twenty minutes, then wring out and dry your yarn."

The wringing process given in the last two recipes is for cotton yarn; cotton cloth or woollen cloth should never be wrung out; simply lift it from the dye with two sticks, immerse it in clear cold water, if you are to rinse it, then hang it up and let it drip. All material must be perfectly clean and thoroughly soaked before being put in the dye.

Note.—"In boiling, all drugs and barks that will not dissolve ought to be put in a thin, coarse bag and taken out before you dip, and the liquor should be settled. Dip only in clear liquor."

CHAPTER XIV

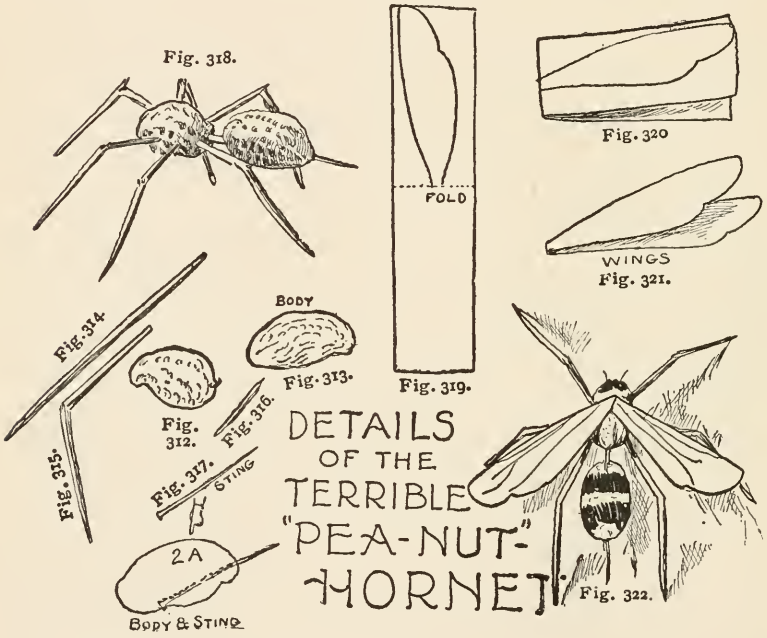
A PEANUT NOAH'S ARK

HANGING one thing into another is always interesting, and the most charming part of a Peanut Noah's Ark is that you can transform these ground-nuts into any and every kind of wild creature. At your command they will come trooping from all parts of the tangled jungle, the elephants leading and tigers, lions, bears, wolves, kangaroos, giraffes, and others following. Ever so many insects, too—the curious peanut spider, actually as large as one of those mammoth Southern tarantulas which often travel North on bunches of bananas, and the enormous hard-shelled hornet, whose sting will not hurt half as badly as its smaller cousins who are alive and whose nests are large and round, dark gray in color and appear as if made of paper. In addition to these you can have beetles of different kinds, grasshoppers, and various sorts of moths.

With the help of bits of paper and some wooden tooth-picks the ground-nuts may be transformed into

Denizens of Earth, Air, and Water.

First we will catch the terrible hornet, but to get him you must select a peanut as near like Fig. 312 as you can find. This is for the thorax or chest; choose a longer nut, resembling Fig. 313, for the abdomen or body. Take six com-



mon wooden toothpicks for the legs (Fig. 314), and bend each stick until it fractures near the centre without breaking (Fig. 315). For the waist use a short piece of toothpick (Fig. 316). For the sting take a pin (Fig. 317). To insert the sting in the body make a small hole on the lower side and thrust in the pin so that the point will project from

the tail; push the head of the pin into the nut until it is out of sight, as shown by dotted lines in Fig. 317, 2A. This diagram gives the point of the pin as it stands out from the nut. Join the chest and body by thrusting one end of Fig. 316 into Fig. 312 and the other end into Fig. 313, leaving a small length of Fig. 316 exposed to represent the slender waist of the hornet, as shown in Fig. 318. This done, put three legs on each side of the insect by forcing the tooth-picks into the thorax or chest peanut (Fig. 318).

Now we have a huge ant, and as ants are practically wingless hornets, some of them even having stings like the bee tribe, it is only necessary to add a pair of wings to complete the terrible peanut hornet. If you have any tracing-paper or the waxed paper from a candy-box, the semi-transparent material will form wonderfully natural wings; but any kind of paper will make

A Pair of Good Wings.

With a pencil draw the pattern (Fig. 319) upon a bit of paper, fold at the dotted line and you will have Fig. 320. With the scissors cut around the outline through both leaves of the folded paper; the result will be Fig. 321, the two wings joined together. Paste them on the back of the thorax, and you will have Fig. 322. To make it look still more lifelike, ink stripes across its back and head, and stick in the front of the head two fine, small black pins for the antennæ. To prove that this is a live hornet, let anyone who doubts the fact press the end of his finger on the point of the sting and he will be satisfied. Should he still claim that the thing is not alive, dip your finger in a glass of water and allow a drop of the fluid to fall on each joint of the legs where the wood is fractured; the swelling of the wet wood

will cause the legs to move in a manner sufficiently lifelike to satisfy the most critical.

It is not commonly known that

Spiders Are Good to Eat,

but the newly discovered specimen known as the *Peanuticus spiderencus* is one which the most dainty little girl may eat without feeling at all nervous as to consequences. Spiders differ in many respects from true insects, but we need only observe the most obvious points of divergence.

Fig. 323.

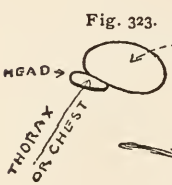


Fig. 325.

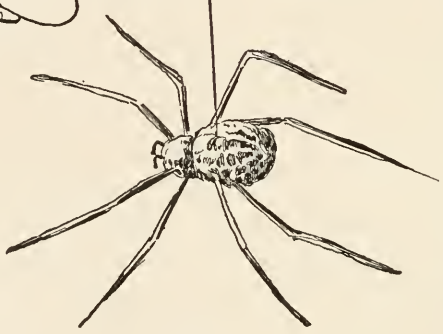


Fig. 324.

First, they have no waist; that is, their body is jammed upon their thorax (Fig. 323). Next, their heads are driven into their shoulders, so to speak, so that they not only have no neck, but there is not even a line to indicate where the head ends and the thorax or chest begins.

From the quart of peanuts select one which looks most like Fig. 323. Spiders have more legs than beetles or wasps. Garden spiders have eight well-defined legs, and our *Peanuticus* belongs to the garden spider family. Therefore, take eight toothpicks and, bending them as before described, make eight legs. Push two legs into each side of the large part

of the nut—the abdomen—inclining them backward, and two more into each side of the small part of the nut—the thorax—slanting them forward, as in Fig. 324. Make the antennæ of two black pins, bent according to Fig. 325; push the pins well into the head of the spider (Fig. 324). If you thread a fine piece of black elastic through the spider's back, allowing a length of about a half yard, and weight the body by fastening a little flattened piece of lead or a small stone on the under part with melted sealing-wax, the *Peanuticus* can be made to dance up and down in the air like a natural spider running on its web. The black elastic will not be noticeable. Tie the end of the elastic on a stick; then you can hold it out from you and have a better view of the curious creature.

Pick up another peanut and see what it suggests. Imagine it with long ears. What would it look like?

A Rabbit, of Course.

Cut two ears from white paper and a tail from the same paper; paste one ear on each side of Bunny's head and fasten the little stumpy tail in place. Then stick two short pieces of toothpicks in the nut for the front legs; bend the back legs at the centre and push the upright part into position so that the lower horizontal portion will be bent forward and rest on the ground. Ink round spots for eyes and a line partially across the front for the mouth.

Camels

are curious creatures, always carrying a little mountain on their backs, and chewing as if they had an inexhaustible supply of chewing-gum tucked away in some invisible pocket. Think of the mountain's back when selecting a

peanut for this animal and find one with a high hump. Cut the head and neck (Fig. 326) of stiff paper or cardboard; ink the eyes and mouth, and slide the head into a slit cut in the nut. Make the tail of heavy black thread or darning-cotton and fasten it on by simply sewing the thread in the nut. Tassel out the end. For the two hind and one of the front legs use three stiff, straight toothpicks; bend the other toothpick for the front left leg so that the camel will appear to be walking. The little animal will stand on three legs, holding the fourth up, as in Fig. 327.

Fig. 326.

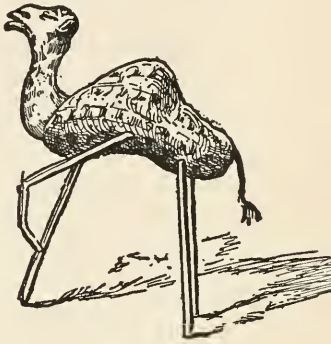


Fig. 327.

Find a nut shaped something like

A Little Chicken,

with part of it inclining upward for the head. Stick two short, bent toothpicks in for feet; if properly adjusted the chick rests on them. Cut paper wings and paste one on each side of the chicken. Make the beak also of paper and insert it in the front of the head. The eyes can be marked with ink.

When among the jungle folks, off in the tangled wild woods,

The Elephant

grows to an immense size, but things are very different in Peanut Land. There the big-eared creature is a wee thing not much larger than the chicken you have just made.

It is a veritable midget of an elephant and not at all dangerous. Look over all your nuts and choose the one most closely resembling the body and head of an elephant; then make two pasteboard front legs like Fig. 328, and two more like Fig. 329 for the hind legs. Cut two ears (Fig. 330) and a trunk (Fig. 331). The tail should be comparatively slender and a trifle bushy at the end. Paste ears, tail, and trunk in their proper places and cut four slits in the lower part of the nut for the four legs, which you may then slide into place (Fig. 332). The tusks are two toothpicks stuck into the lower part of the head. By the diagrams it may be plainly seen just how the work is done.

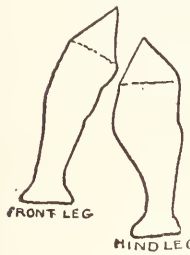


Fig. 328. Fig. 329.

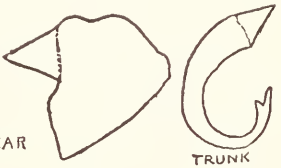


Fig. 330. Fig. 331.

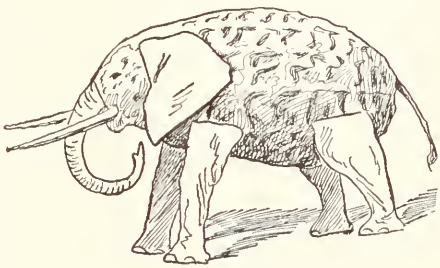


Fig. 332.

The Owl

is fashioned from a nut without the joint-like extension. Ink the eyes, beak, and wings, and with heavy thread or darning-cotton sew the bird to a twig or toothpick. Divide the stitches forming each foot into two portions or two toes, as a real owl shows only two when in the same position (Fig. 333).

Fig. 333.

In the queer Peanut Land

Storks

hold an important position. They are very proud and carry their heads high as they stand perched upon their long stilt-like legs. Their Holland relatives delight in building nests on the tops of chimneys, and it is always considered a sign of good luck for the occupants of the house when Mr. and Mrs. Stork favor them with their presence. Your stork will not have to remain on the outside of the house, because, not being as large as the others of his family, you can find room for him in almost any place. Make the bird's body of the most common-shaped peanut, his legs of two stiff wooden toothpicks, and his head (Fig. 334) of stiff paper. Mark eyes on the head and put the different parts of the bird together. He will stand up straight if you punch his feet into a piece of patented paper used in packing bottles (Fig. 335). If you have no such paper, use anything you can find that will answer the purpose.

Fig. 334.

Fig. 335.

Lobsters

which will not pinch also live in Peanut Land. They have eight bent toothpick legs, a tail of paper (Fig. 336), and

paper claws (Fig. 337). The antennæ are toothpicks. Real lobsters have one front claw larger than the other, but on peanut lobsters these are of the same size. When you have made the lobster (Fig. 338) you might boil him by dipping the funny little thing in red ink, for lobsters are always red after being boiled.

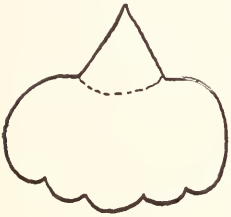


Fig. 336.

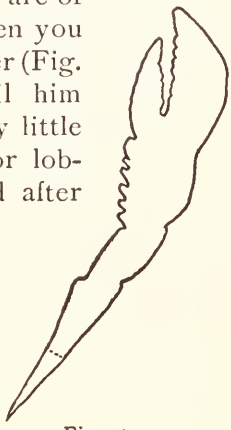


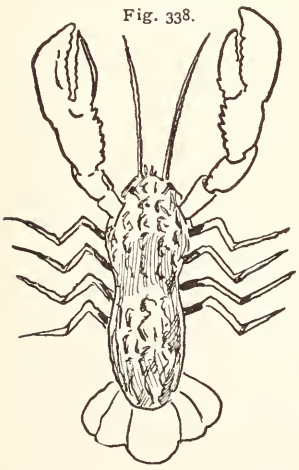
Fig. 337.

All these animals need a

Noah

to keep them in order in the Ark. Make Noah entirely of peanuts; a small one for the head, a large one for the body, two for the arms, two for each leg, and two small nuts for the feet. String the nuts together with strong, coarse thread. Make the hair of a number of strands of black thread tied together in the centre. Pin this wig on the peanut head, part the hair and spread it out to meet in the back and gum it in place. Mark the face with ink and dress the doll with loose trousers and loose sack coat. Cut the hat of common wrapping-paper. First make the brim of a circular piece of paper, with a round hole in the middle; then the crown of a strip of paper slashed on each side. Fasten the ends of this together, turn

Fig. 338.



out the slashes on one side and slide the brim over the crown down on the turned-out slashed portion. Paste it on tight. Next turn in the slashes on the top edge of the crown, fit a disk of paper over them as you would put a lid on a pan, and gum the top of the crown in place. You will find Mr. Noah rather loose-jointed, but that does not matter; he is better so, for he is not too stiff to run about and attend to his collection of animals. Make Mrs. Noah of peanuts as you did Noah, and dress her in bright colors with a gay little hat fastened firmly on her head.

The Ark

may be an ordinary pasteboard box, with a gabled roof pasted on the lid. Take a box like that shown in Fig. 339,

Fig. 341.

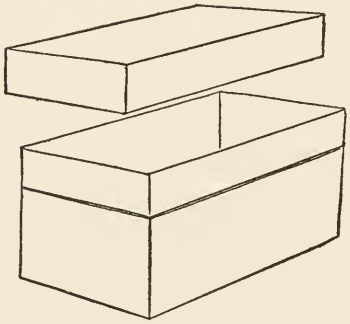


Fig. 339.

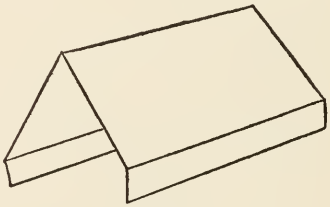


Fig. 340.

bend a piece of stiff paper (Fig. 340), paste the sides of Fig. 340 on the lid (Fig. 341), and over the two open ends gum triangular paper cut as in Fig. 342. Paint windows and a door on the sides of the Ark; then paste the Ark on a piece of another larger box-lid cut like Fig. 343. Put Noah and his wife in the box with all the animals, and tie a string through a hole pierced in the front of the stand of the Ark, so that the Ark with its entire cargo of peanut animals may be dragged from one place to another (Fig. 344).

Noah's Ark and all its animals has ever had a great attraction for young folks, and it is not an uncommon sight to see baby grab Noah, Mrs. Noah, or some of the gorgeously painted animals, and put the toy in its mouth. Many of the colors used in painting the shop toys contain poison,

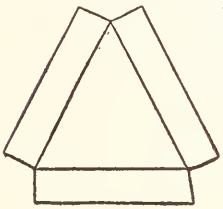


Fig. 342.

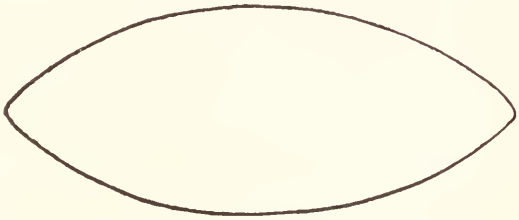


Fig. 343.

but the present Mr. and Mrs. Noah and all the zoölogical collection described in this article are healthy, wholesome food. So when you tire of playing with them you may eat them, with no danger of ill consequences. Just think! Elephant and camel for first course, stork and lobster second, and

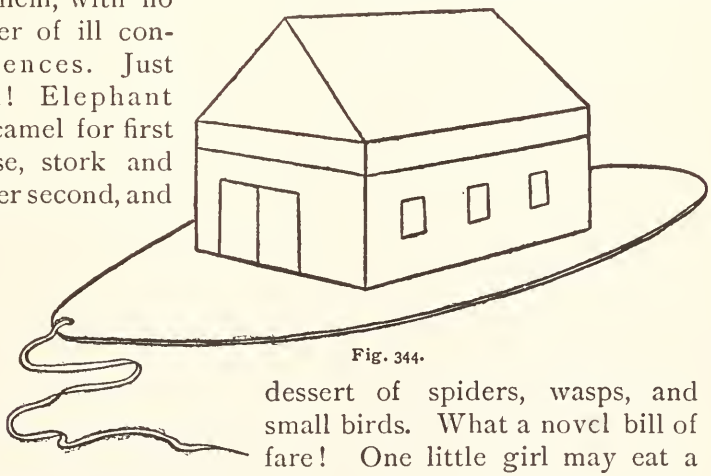


Fig. 344.

dessert of spiders, wasps, and small birds. What a novel bill of fare! One little girl may eat a couple of elephants, several giraffes, a rhinoceros or two, and still have a good appetite for her regular dinner.

Should you think of some favorite animal not here described, which would be an addition to your collection, put your wits to work and hunt up a peanut suitable for the purpose; then find a photograph or printed picture of the animal, that you may be sure to have it as perfect as the materials will allow. In this way almost

Any Animal, Fish, or Insect Can be Made,

for after working out the given examples you will have gained sufficient knowledge of the governing principles of the work and enough skill to enable you to continue the manufacturing of peanut toys alone or with the help of other girls and boys.

Different Lines of Objects

can also be formed from the nut. Break open one with only a slight indenture at the centre and make the two halves into fairylike little sailing vessels by the addition of a sail and mast cut all in one from white writing-paper, and gummed to the bottom of the boat near the large end. It requires but a moment to make these tiny crafts, and they will sail across a basin of water as if they were in reality large affairs on the salt sea, their white wings gleaming out in the most charming manner. Stir the water slightly with a stick and see how the boats dance; blow gently on the sails and off the two will race for the opposite side of the basin. If you are near any small stream or pond you may launch your tiny boat and watch it bravely breast the little ripples.

CHAPTER XV

A FLOWER FEAST

THIS dinner party will be great fun, especially as there need be no worry about cooking, for the sun, with the assistance of the rain and air, has attended to that part of the preparation.

We shall have to provide some sort of a dining-table. An ordinary letter-paper box about eight inches long and five inches wide will answer the purpose. Spread over the table a fresh, white table-cloth of paper, and for a centre-piece choose

Fig. 345.

A Pineapple

made of a cone one and one-half or two inches high (Fig. 345), cutting it off flat at the stem (Fig. 346) so that it will stand firmly on the table (Fig. 347). On the top of the fruit pin a small bunch of coarse grass tips tied together with thread

Fig. 346.

Fig. 347.

Fig. 348.

(Figs. 348 and 349) and use the petals of a bright-colored flower, which will lie flat when the lower portion is cut off, as an ornamental mat to place under the pineapple; a nasturtium blossom (Fig. 350) will look well.

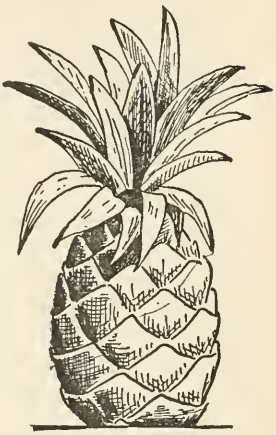


Fig. 349.

Almost everyone is fond of

A Fine, Fresh Fish

for dinner, so we will select one which is sound and perfect. Carefully open a large-size milk-weed pod in the seam which you will find on the rounded side (Fig. 351) and take out the beautiful white fish composed of the seeds clinging to their downy wings, the seeds forming the fish's scales (Fig. 352) and the down its body. Cut out a piece of white

Fig. 350.

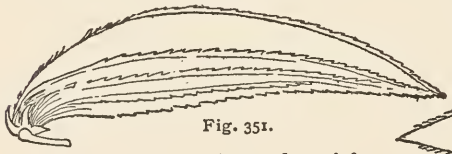


Fig. 351.

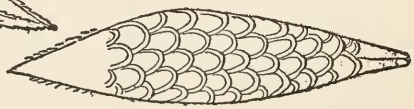


Fig. 352.

paper (Fig. 353) and with a drop of paste fasten it on

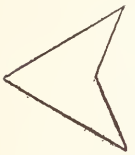


Fig. 353.

the fish to form the tail (Fig. 354); also gum a small, round

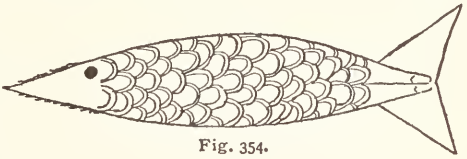


Fig. 354.

piece of inked paper in position for the eye; place the fish on a dish made from a long, green leaf (Fig. 355). Hollyhock seeds, which are packed together in rounded forms, must furnish cheeses, the resemblance being very marked (Fig. 356). Two will be required and should be placed on the opposite sides of the table.

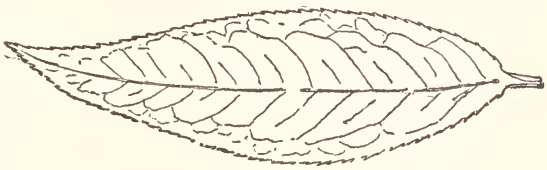


Fig. 355.

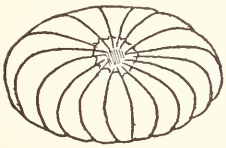


Fig. 356.

Fig. 357.

The Rosy-cheeked Apples (Fig. 357) which come from the rose-bush are the seed-vessel of the flowers, and so closely do they imitate little apples, when detached from the bush they might easily be mistaken for such. Select a leaf plate, fill it with the apples and place them on the table between the pineapple and the salad. They give a bright note of color, which helps the decoration.

The

Fruit Salad

shall be dainty enough for a fairy queen. We will mix shredded orange from the petals of a full, fresh young dandelion blossom (Fig. 358 shows one of the petals magnified)

with shredded strawberries produced from the common red-clover blossom (Fig. 359 represents an enlarged petal), and shredded cocoanut made from the ordinary white-clover petals (Fig. 360 also magnified). When these are well mixed serve them on a pretty, green leaf plate, and the dish will give another bit of mingled color with its pink, white, green, and yellow.

Fig. 358.

Fig. 359.

Fig. 360.

The Cups and Saucers

are furnished by the oak-tree and made of acorns. The lower part (Fig. 361) forms the saucer; the upper (Fig. 362) the cup. Cut off the top, then remove the kernel and the cup is ready for use (Fig. 363). It is better to select a large-sized acorn for the saucer and a smaller one for the cup, in order that the cup may have more space in the saucer and not fit too closely (Fig. 364). Miniature dippers can be fashioned of acorn cups by piercing a hole

Fig. 361.

Fig. 362.

Fig. 363.

Fig. 365.

Fig. 364.

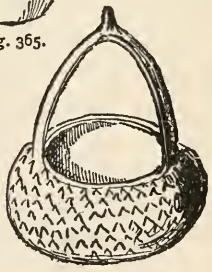


Fig. 366.

in one side near the top and pushing a slender stick through until it rests against the opposite side (Fig. 365).

Odd little baskets are also made of acorns (Fig. 366) by cutting away all of the top of the acorn except a band

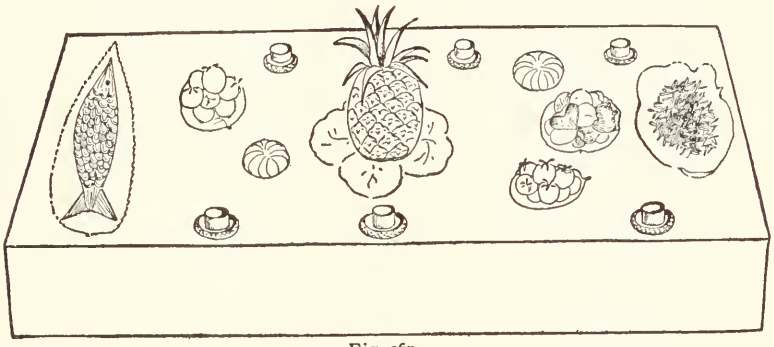


Fig. 367.

through its centre; this forms the handle. The acorn is left in its rough saucer, which gives the outer surface of the basket, the inner surface being the interior of the acorn proper. Make several cups and saucers, and the feast will be ready for others to see (Fig. 367). Of course, it is only intended to give pleasure in this way and not really to serve as food.

Rose petals make an excellent substitute for the common

Snapping Bonbons,

such as are usually served at parties with the refreshments. Choose the largest and best petals (Fig. 368) and gather up the edge of one all the way around, holding the folds securely; a little, bag-like object is thus formed

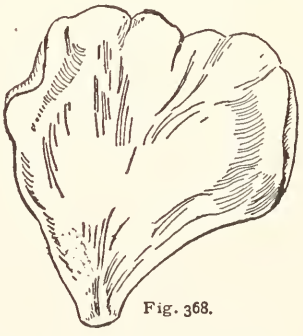


Fig. 368.

(Fig. 369), which, when held firmly with the thumb and forefinger of one hand and struck against the out-stretched palm of the other, snaps with a loud noise. If any opening is allowed when gathering up the edges of the petal, the air will not be confined and consequently the bag will not snap, and you must try another.

Fig. 369.

Fig. 370.

Of the thorns covering the stems of the roses you can make chains by sticking the point of one thorn into the base of another and continuing in this manner until the chain is as long as you desire (Fig. 370).

The party being over we will make some

Baskets of Green Burs.

They are pretty and rustic and can be shaped into almost any style; each bur is provided with little hooked fingers (Fig. 371) that lock when the two burs are pressed against each other, enabling them to stick fast together—not so tight, however, that they cannot be separated when desired. Be sure the burs are young and fresh; they will then be free from all dryness and perfectly safe to work with; if too old they will be difficult to handle and apt to drop the small, thorny particles. Before commencing the work spread a newspaper out in front of you, then, placing your burs on that, take one bur and with several others form a circular row around it; another row around completes the bottom of the basket (Fig. 372). Build up the sides on the top of this last row and form the handle with a row of burs long enough to reach easily from side to side

of the basket (Fig. 373). You can experiment and make all sorts of things — vases, bowls, plates, chairs, tables, and houses—

Fig. 371.

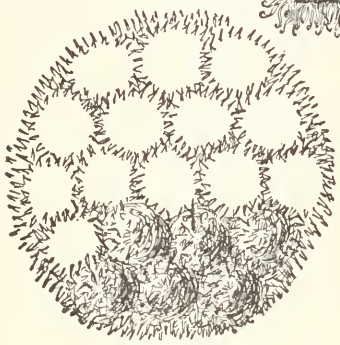


Fig. 372.

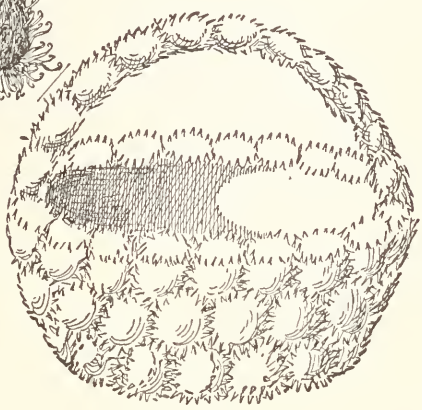


Fig. 373.

of burs, and the work is very interesting and easy.

Beside contributing to the salad, the dandelion furnishes

A Variety of Amusement.

You have only to hold its golden head up under your chin to learn if you are fond of butter. With one hand hold the flower (Fig. 374), with the other hand a mirror. If you see a yellow reflection cast upon your chin by the blossom underneath, you enjoy using plenty of butter on your bread. Take the grandfather dandelion with his round, white head (Fig. 375) and blow once, then again and again, three times in all; the number of downy seeds left on the head denotes the time of day. For instance, should all be blown away except three (Fig. 376), it would mean that it was three o'clock; if two are left it would say two o'clock, and so on.

Select another nice

Old Grandfather Dandelion

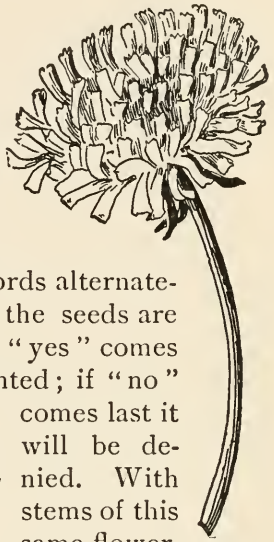


Fig. 374.

and he will tell you when you are fortunate enough to obtain a certain wish. First make a wish, then say aloud "yes" and give a single blow; next say "no" and blow again. Proceed in this way, repeating the two words alternately, giving one blow at each, until all the seeds are detached from the head. If the word "yes" comes at the last blow your wish will be granted; if "no" comes last it will be denied. With stems of this same flower, which, you know, are hollow and much smaller at the top than at the bottom, you can make pretty green rings by pushing the smaller into the larger end of the stem (Fig. 377). To make a chain, join a number of rings together by first passing one end of the second stem through the first ring before the two ends of the second stem are fastened together, doing likewise with the third, fourth, and fifth stems (Fig. 378).

Fig. 375.

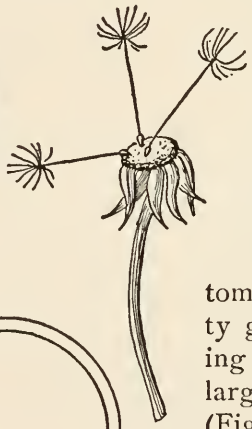


Fig. 376.

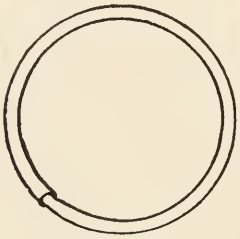


Fig. 377.

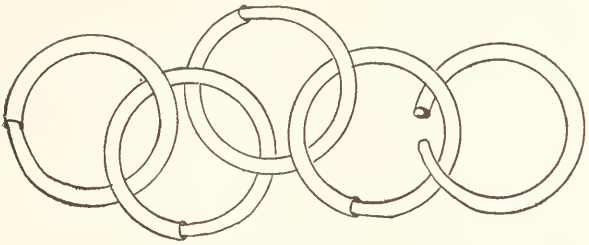


Fig. 378.

To make an odd little ornament, split the dandelion stem about two inches down lengthwise through the centre (Fig. 379) and draw one side strip through your lips several times —it is perfectly harmless—until it curls up (Fig. 380). Treat the other side in the same way and it will also curl (Fig. 381).

Fig. 379.

Fig. 380.

The Morning-glory

gives us some of the most fragile flowers of which we have knowledge; they are so delicate and fine of texture not many artists are able to render perfectly the peculiar charm of the blossom. Beautiful in their varied colors, they blossom until killed by frost, and growing as they do almost anywhere, even along the dusty roadside, their cheerful faces sing out a bright "Good-morning" if one is there in time to find them open. Usually they begin to close early in the day, and when they close they change into twisted elongated affairs which are

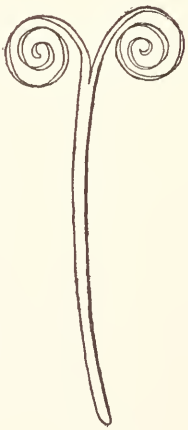


Fig. 381.

eagerly sought by children bent on having a little sport. If you will gather a few of these floral cornucopiæ you can make them pop so loud they will rival the torpedo. Hold tight the opening end of the closed blossom with the thumb and forefinger of the right hand and fill it with air by gently blowing in the wee stem end; grasp this securely with the left hand; then suddenly push the two ends together, and snap! will go the flower.

Home-made Baskets.

CHAPTER XVI

BASKET-WEAVING

IN AND OUT, in and out; under and over, under and over; around and around, again and yet again; widening and narrowing, and, lo! a basket is woven. A child of eight can learn it, a woman will find the work a charming pastime; so this is written for girls of all ages.

Dye your reeds, put all the bright colors you like into your baskets, and see if they are not much prettier and more substantial than the so-called "Indian work." Red, blue, green, yellow, black, purple—a butterfly's wing need not be gayer nor an old-time work-basket more useful. Large, small, medium-sized, deep or shallow—only one's desire need determine the question.

Materials for Weaving

A variety of materials are adapted to basket-weaving, but the most substantial baskets are made of reeds. When the principle is mastered you may use anything you choose which will lend itself to the work.

The basket-reeds can be purchased from any reed and rattan manufacturer, and come in various sizes. Nos. 2, 3,

and 4 are the ones to use, and as No. 4 is quite heavy you will need that only for large baskets, such as waste-paper baskets, flower-pot cases, etc., and even for such purposes No. 3 will answer. No. 2 is the finest, and of that you will use the most. The prices range from twenty-three cents to thirty-five cents a pound, No. 2 being the most expensive. Beside the reeds you will need a twist of raffia; this is a soft material used by the florist for tying up plants, and may be obtained from him at little cost, probably eighteen or twenty cents a hank.

To Prepare the Reeds

The reeds come in bunches of five pounds each; separate these, and taking each reed wrap it loosely around your hand to form a coil, twisting the ends in and out to hold them in place. This puts your material into a convenient form, and you need unwrap the reeds only as you have use for them, one at a time. Have ready a pan or pail full of water, for the reeds must be soaked awhile before they are used to make them more pliable and to keep them from breaking.

Try a small basket at first—let us say a rather flat, shallow one—and for this one coil of No. 3 and several of No. 2 reeds will be enough. When they have soaked for about five minutes take out the No. 3 reed, unwrap it, and cut six pieces twelve inches long and one piece eight inches long; then untwist your raffia and cut off one strip.

Weaving the Basket

The reeds you have just cut are for the ribs of your basket. Lay the short rib to one side within easy reach, then take three of the ribs in your left hand and cross them with the other three, as in Fig. 382. Be sure the reeds lie

flat and side by side; do not bunch them. Hold the ribs where they are crossed between the thumb and first finger of your left hand, the vertical ones on top, as shown in Fig. 382, and with your right hand place one end of the raffia on top of the reeds, under your left thumb, leaving the free end to fall to the left, as in Fig. 382. Hold the ribs securely now, and bring the raffia up under those on the left-hand side close to the crossing, then over the upper ribs

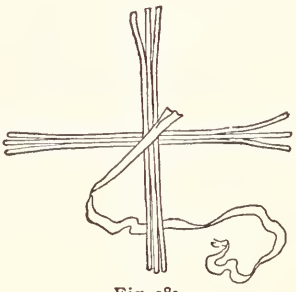


Fig. 382.

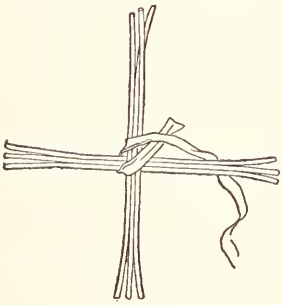


Fig. 383.

(Fig. 383), under the right-hand ribs and over the lower ones, going around twice and catching down the end of the raffia in the process; then trim off the remaining short end of the raffia. Do not loosen your hold with your left hand, but with your right separate the ribs as well as you can and begin to weave the raffia, starting at the left-hand rib of the upper group, as shown by letter A, Fig. 384. Bring the raffia over this rib and draw it down close to the centre, then under the next, over the third, under the fourth, and so on until you have been once around, when you will find another rib necessary to make the weave come out properly. Here is the place for the short rib; place one end of this rib across the centre of the others, as

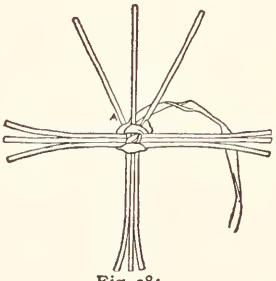


Fig. 384.

shown by letter B, Fig. 385, and hold in place with your left thumb. Bring the raffia over the new rib, and continue weaving as in the first round; when you reach the short end of the rib bind it down with the raffia as you carry it over one of the other ribs, as shown by letter C, Fig. 386. Weave steadily with the raffia now, and keep your mind on separating the ribs until they are of an equal distance apart; also remember to draw the raffia down firmly each time you pass it in and out between the ribs, first on one side, then on the other. Of all parts it is most essential that the centre of the basket should be firmly and strongly woven. Be careful not to weave under or over two ribs at one time. Under one, over the next, is the rule; and when you find, as you will occasionally, that something is wrong, and alternate weaving has become impossible, look back over your work and you will discover that you have somewhere crossed two ribs at once. In such a case pull out the work and correct the mistake.

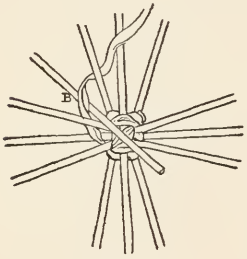


Fig. 385.

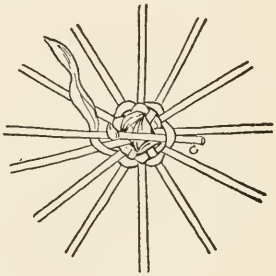


Fig. 386.

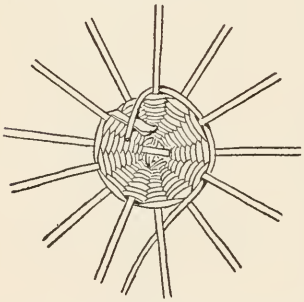
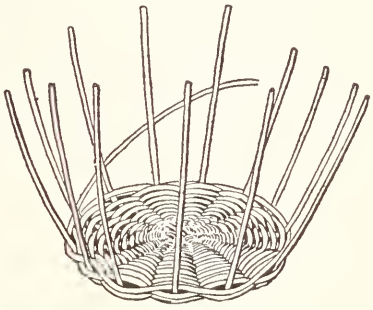


Fig. 387.

Weave the raffia until the centre is about two inches in diameter, or until you have used up the raffia, then take from the water a coil of the No. 2 reeds, unwind it, and placing one end across the end of the raffia, hold it

Weaving Baskets.

with the thumb of your left hand, and proceed to weave with the reed just as you did with the raffia (Fig. 387). In all cases the joining must be done on the inside of the basket.



Begin to shape the sides
By bending the ribs upward

Fig. 388.

Weave Your Reed

as closely as possible, and when you have a disk about four inches in diameter begin to shape the sides by bending the ribs upward toward you (Fig. 388) and drawing your reed tighter. If this slips up in the process, push it back in place and hold it down by passing the fingers of your left hand between the ribs from the inside. Indeed, this is a good way to hold your basket as soon as the ribs are sufficiently separated. Your left hand follows your right always in basket-weaving, holding in place what the right hand commits to its care.

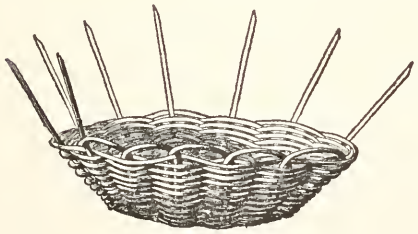


Fig. 389.

When the First Reed is Used Up

take another, cross the ends, and continue as you did when beginning with the first reed. As your weaving progresses do not forget to keep the distances between all of the ribs equal, and try to avoid the tendency they have to curve spirally. When your basket has slanting sides you will find it will

almost shape itself after you have given the ribs a sharp bend at the first and started them in the right direction. By bending the ribs too much you will make straight sides to the basket or have them slant in instead of out. Two inches is a good depth for a small basket, and when you have woven that much, cut off the ribs, allowing them to extend about two inches beyond the edge, as in Fig. 389, and trim the ends slantingly, as shown in the same diagram. Bend the end of one rib down, and push it into the basket on the farthest side of the next rib (Fig. 389). Do this with the second rib, and so continue around until the edge is "bound off." When the ends of the ribs do not slide in easily, pry open the space with a pair of closed scissors, turning them slightly.

All the baskets shown in

The Photographed Group

are woven in exactly this manner from start to finish; the shaping is done by bending the ribs this way or that, and by tightening the weave when narrowing and loosening it when widening. There is a difference, of course, in the length of the ribs, the larger baskets requiring longer ribs and more of them, but there must always be an even number to start with, the odd rib being added after the first round of raffia-weaving.

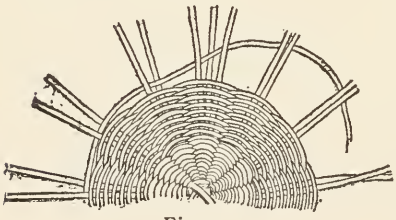


Fig. 390.

It is difficult to handle more than ten ribs at the start, but where the basket is large or a close weave is desirable you may double the number when the disk for the bottom is almost complete. To do this, cut a number of the ribs one-

half the length of the ones you have started with, and after trimming the ends as in Fig. 389, insert one at the right of each of the original ribs, as shown in Fig. 390, pushing each well down toward the centre. This will give you an even number once more, so a third rib must be added to one of the groups, and should be inserted at the left, the original rib being between the two new ones (Fig. 390). Separate these ribs as you weave until all are of an equal distance apart, and continue the shaping of the basket.

The Covers

are pretty and useful additions to some baskets; they are woven in the same manner and are shaped according to fancy. The saucer shape is the most common style and requires no sudden bend in the ribs, but rather tight weaving and an indulgence of the natural inclination to curve from the centre.

It is only in adding the rings for the

Fastenings

that you need make any change in the weave, and that is but a slight one. When your cover is almost large enough, bring your reed up to form a small ring on the outside, crossing one of the ribs, as shown in Fig. 391; push the end of the reed through the ring several times, making a twist as in Fig. 391, and continue weaving as before.

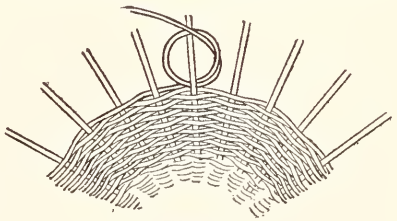


Fig. 391.

This ring should be about one-fourth of an inch from the edge of the cover. The corresponding ring in the basket is made in the same manner, and should be placed one-half

inch from the edge; it must be a trifle smaller than the one on the cover, that it may be slipped through, and so form a fastening.

Make a Hinge

by threading a strip of raffia through the basket near the edge, and tying it on the inside, then through the lid, making a stitch across the reeds, back to the under side of the cover, bringing it around the loop of raffia to form a twist, and finally into the basket, and once more tie on the inside (Fig. 392).

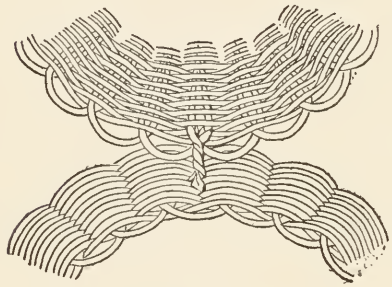


Fig. 392.

You may revel in

Color

if you like, in the pretty work of basket-making. The soft broken colors, brightened at times by touches of more brilliant tones, are really beautiful, while even those which, alone, seem crude and glaring, by some happy accident of combination often produce charming effects. A fine line of black is sometimes effective and looks well next to the whitest of the natural-colored reeds.

It is

A Law in Decoration

that bands of color should be so placed as to give the idea of additional strength to the object decorated—that is, on the most exposed parts, such as the fullest swell of a curve and the base and edge. You will find that this rule is observed in most decorated pottery, and it is a good one to follow in basket-weaving; the nearer one comes to embodying it in the work, the more satisfactory are the results.

Another style of decoration is to start with a dark color at the base of the basket and gradually work in the different shades up to the lightest color at the edge. One color need not be used in this, such as red running up to pink, but gradual blending of one color into another.

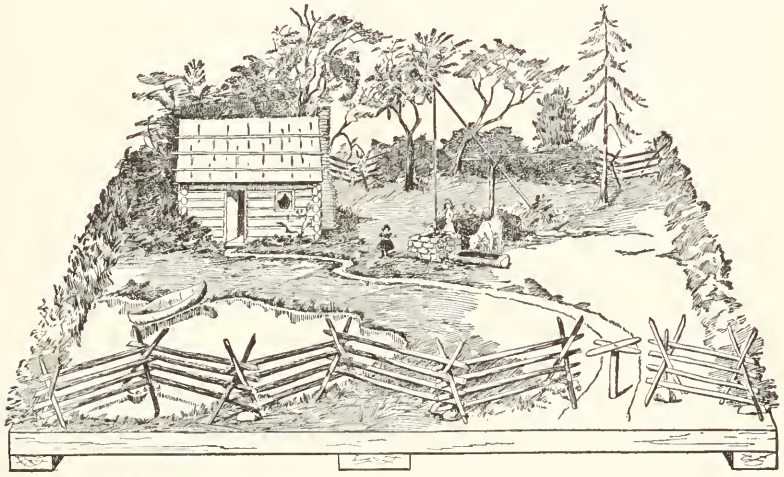
CHAPTER XVII

AN "ABE" LINCOLN LOG-CABIN

BRIGHT, gray-eyed little Kentucky boy, of whom all have heard and whose memory is honored by the entire nation, lived years ago in a quaint log-cabin so small that it would now seem to be about the right size for a large play-house. There was but one room, and that contained only a few pieces of rough home-made furniture. The boy, with his musical laugh, was busy and healthy, making the best of everything and sleeping soundly on the dried leaves piled in one corner of the loft over the room. There were no stairs for the little fellow to ascend, so he climbed to his primitive couch by means of wooden pegs driven in the side of the wall. He never complained of any hardship, but always tried to better things; and after he grew up to manhood he tried to better his country, and succeeded.

Imagine this brave boy dressed in the every-day costume of the place and times, wearing a 'coon-skin cap which partially covered his thick dark hair, a homespun shirt, trousers of roughly tanned deerskin, and on his feet, not shoes, but home-made moccasins. Thus attired, he daily trudged by the side of his sister Nancy, walking several

miles to a school-house, which was also built of logs, so arranged that they stuck out and formed little recesses in which the children played hide-and-seek. There were no windows in the building; the day crept through the open space where a log had been removed to admit light to enable the girls and boys to see to study. The school floor was the bare brown earth, not even boards; yet from such



An "Abe" Lincoln Log-cabin.

modest surroundings came one of the greatest of Americans. Could you have been at the World's Fair in 1893 you might have seen a log-cabin which was the home of this boy after the family had moved to Illinois. The house was on exhibition at the Fair, having been purchased for the purpose by a special association.

Probably not many Northern girls have ever seen a genuine log-cabin, though some may have spent part of their Summer vacation in recently built log-houses in the

mountains, but these buildings are usually too luxurious and spacious to bear any resemblance to the pioneer structure of logs. The rare human life which has passed through some of these old log-cabins and left its influence upon the world, will cause the cabins to be remembered long after the more pretentious mansions have been forgotten. It is noble lives which are of real worth, not inanimate things.

Naturally you would be glad to see the funny little Kentucky log-cabin where Nancy's brother first lived, but long ago the cabin was torn down; however, the logs were saved, and in 1895 the old house was rebuilt on the original site. The surest way of seeing a log-cabin like the one in which our little friend and his sister lived is for you to erect such a house. Then you will know exactly what little "Abe's" home was like—for you must have guessed before this that Nancy's brother was the martyred President, Abraham Lincoln.

Of course, you cannot build a log-cabin large enough for grown people to live in. Yours will be

A Miniature "Abe" Lincoln Cabin,

and the longest and heaviest logs should be about as large around as a lead-pencil and measure not more than eight inches in length, the short side logs being five and a quarter inches in length. Notch each log at both ends and on both sides (Fig. 393), except the four foundation logs, which require notches at each end, but only on the upper

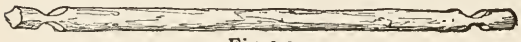


Fig. 393.

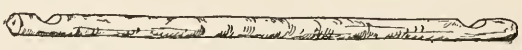


Fig. 394.

Making an "Abe" Lincoln Log-cabin.

side (Fig. 394). When erecting the house fit the cross logs together at the notches (Fig. 395), in order to make the walls firm and to avoid wide spaces between the logs. Let the elevation or height of the house be four inches (Fig. 396). In building the roof use end logs graduated in length (Fig. 397). These gabled ends should raise the house two inches through the centre. Before adding the roof, slide in two extra side logs, each half an inch or so longer than the side logs proper; place one at each end of the top of the house along the inside of the last logs on top of the side walls (Fig. 398, F E). The longer logs are used to extend the roof back and front beyond the building, causing it to project as do the roofs on real houses. To produce a like result on the sides, have the front and back logs of the roof longer than those built in the front and back of the house, the difference being the same increase in measurement as in the sides of the roof (Fig. 396, A B and C D).

Fig. 395.

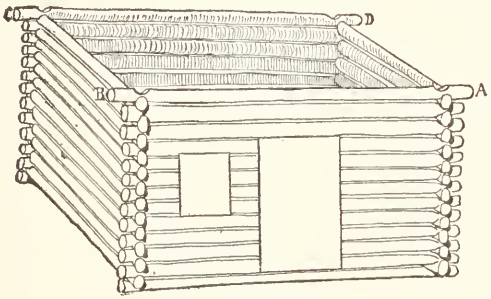


Fig. 396.

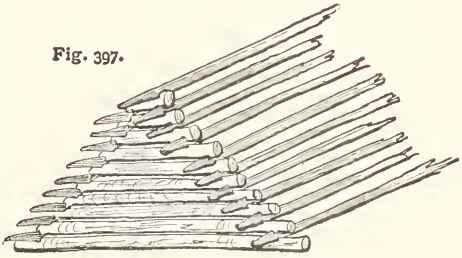


Fig. 397.

Cut a piece of paper two and one-quarter inches long

and one and one-quarter inches wide to indicate the door; fasten it by the four corners to the centre of the front of the house immediately above the foundation log. Cut another piece of paper the size of the window—one inch long and three-quarters of an inch wide—and paste it also on the front of the house midway between the door and the end of the house, allowing it to come a little lower than the top of the door (Fig. 396). With paint-brush and white paint mark the logs along the edge of the paper door and window; then carefully take down the house, placing the logs in eight different piles: the front of the roof in one place, back of roof in another, first end of roof in the third pile, and second end in the fourth. Tie each group of logs separately and label. Proceed in like manner with the four sides of the house proper, first removing the pieces of paper. Cut the logs marked with the white paint on the inside of the lines to make openings for the door and window, then rub off the remaining paint from the logs.

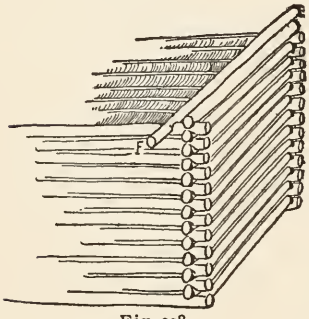


Fig. 398.

Now your material is

Ready for Building

and you must find some land upon which to erect the house. Fortunately log-cabins need no cellars, so digging will be unnecessary, and the ground need not be deep. A piece of bookbinder's stiff pasteboard or a light-weight wooden board seventeen by twenty-three inches or thereabouts will prove the best kind of a ground plot and, after space is reserved for the house, will allow for a large yard. Mark the

location for the house a little to one side of the centre and near the back of the lot, as shown in illustration of An "Abe" Lincoln Log-cabin.

Have ready some strong glue and begin the building of the cabin. Glue down the four foundation logs to the board, being cautious to lay them straight and even; then proceed as when first erecting the building, only this time glue each log to the lower ones at the notched ends, using putty in place of mortar between the lengths of the logs. Now, do not say you have no putty. If you cannot get it, use plaster-of-paris; if you have no plaster-of-paris, use clay; and if there is no clay use mud. The ends of the logs bordering the window and doorway must be held level and kept from falling together by chips glued in between them (Fig. 399).

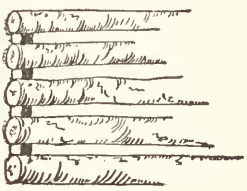


Fig. 399.

Be sure to have the four sides of the building plumb. Do not let the walls lean one way or another. This item must be borne in mind constantly while building.

When the House is Up,

with the exception of the roof, measure the two sides of the door and window and cut a thin, flat piece of wood—an old cigar-box will do—in the desired width and length for jambs. Glue the pieces in place. Fig. 400 shows the first jamb on one side of the doorway. When all the jambs are fastened on measure the space of the doorway and cut a door of the thin wood according to the

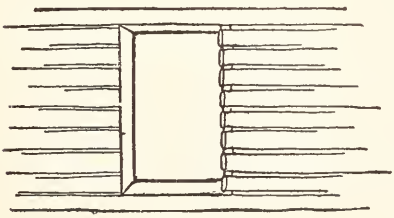


Fig. 400.

measurements. Be sure it fits, and see that it moves easily back and forth. The door cannot have a knob, because during those early times there were no door-knobs in this country—people used door-latches, mostly of wood, with a string hanging down on the outside for friends to pull and thereby lift the inside latch, causing the door to open.

Fig. 401.

If the household did not wish visitors the string was pulled inside the room; then no one outside could open the door, as there would not be anything to catch hold of. This explains the old saying, "The latch-string hangs on the outside of the door." Bore a hole through the little cabin door with the red-hot end of a hair-pin, for the latch-string; move the hair-pin around and around in order to burn the hole large enough to admit the threading through of a string. Dampen one end of a short string, twist it to a point and pass it through the hole to the other side, turn the door over and make a knot in the end of the string large enough to prevent it coming through when the string is pulled from the outside. Fig. 401 shows the inside knot and Fig. 402 the outside string.

Fig. 402.

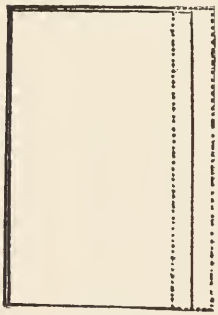


Fig. 403.

Hang the Door

by means of a cloth hinge; glue a half inch wide strip of muslin lengthwise along one edge of the inside of the door (Fig. 403), leaving the other half of the muslin to be glued on the inside of the door jamb that the door sill may be on the

outside (Fig. 404). After the door has been satisfactorily secured in its proper place build on the roof. As a substitute for clapboards or shingles glue birch-bark over the rafters to serve as a covering, first bending the bark through the centre to fit the roof, as a sheet of writing-paper is folded. When the roof is on, fasten over it lengthwise slender poles at wide intervals, that the roof may resemble the original clapboard style. In real houses these poles were laid across to hold the rough clapboards in position and have them "break joints," which means that the clapboards, which resemble very long, large shingles, are placed in rows in such a way that the centres of the solid bottom edges of those in the upper rows overlap and cross the spaces between the clapboards in the lower rows, just as ordinary shingles are put on houses to-day.

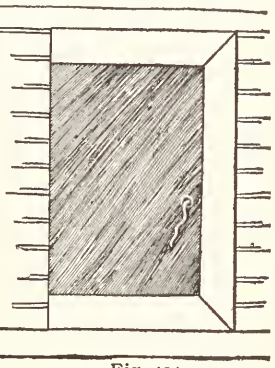


Fig. 404.

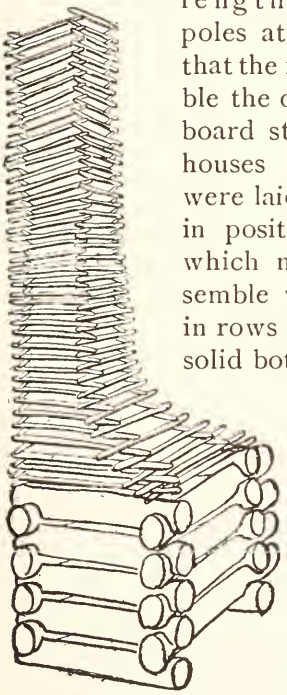
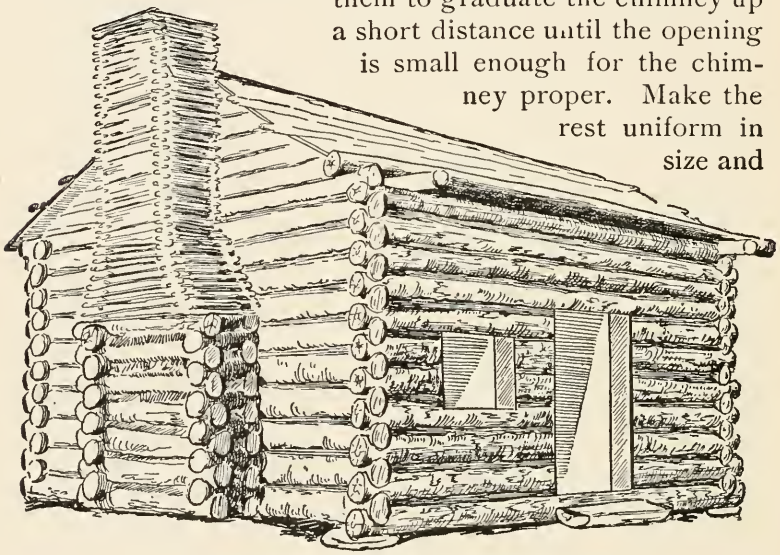


Fig. 405.

The Chimney

must be at one end and on the outside of the house. Begin at the ground, and in log-cabin fashion build the lower part up about an inch and a half of logs. This portion in a real log-cabin opens on the inside of the room and constitutes part of the framework of the fireplace, but in this tiny house

it will not be necessary to carry out the interior in detail. Having securely glued the lower part of the chimney and plastered it between the logs, get some burnt matches or split a number of sticks into very slender lengths for the remainder of the chimney. These are not to be notched. Use them to graduate the chimney up a short distance until the opening is small enough for the chimney proper. Make the rest uniform in size and



A Fac-simile Miniature "Abe" Lincoln Log-cabin.

extend it up an inch and a quarter higher than the top of the house (Fig. 405). If the chimney was a real one it would have to be plastered thick inside with mud, and between the logs and sticks, but as it will not be used for fire or smoke, glue will answer at the corners and putty or some other substitute for the cracks, as in the illustration of A Fac-simile Miniature "Abe" Lincoln Log-cabin.

The different materials needed for the cabin and grounds can be readily obtained. Almost any kind of fairly

smooth twigs will make fine logs, but try to have them uniform in size.

You Can Find Plenty of Moss

for foliage in the woods or swamps, on old stumps of trees and weather-beaten fences, and a few varieties are to be had in the open fields; that growing in pine woods or rocky places is generally satisfactory. Gather the moss wherever you can find it and obtain as many varieties as possible. Look also for the beautiful lichens, varying in color and form; detach them carefully and bring the curious little plants home in a box separate from the moss. The dainty lichens do not need preparation for use, but the moss does. Place it top down on paper near the fire and dry quickly without scorching. After it is dry shake off all impurities, such as dead leaves, grass, sand, and rotten wood. Moss that grows in swamps should be carefully washed soon after being obtained, as the roots are difficult to clean when they become dry. As soon as the moss has been thoroughly dried, put it away in a dark place until you are ready to use it.

To obtain

The Bark for Roof and Canoe,

hunt up a birch-tree—one that has been dead a short time is best—and with a sharp knife peel off the pieces needed. The bark should be of a rich dark reddish-brown on the inside. Cut it with an old pair of scissors into the desired shape and size; then place the pieces between two smooth boards to dry. Put weights or stones of convenient size upon the upper board, and very soon the bark will be flattened out and ready for use.

The trees are small, branching twigs. Search for those which resemble most closely little trees. Examine carefully the structure of real trees, stand under the branches and gaze up into the foliage; in most varieties, you can see exactly how the tree grows. Try to remember its appearance; where and how the limbs stand out and the manner in which they branch off; then select your twigs accordingly.

Little "Abe" was obliged to take a long walk to the spring for drinking water, but since the size of our lot does not permit placing a spring at sufficient distance from the cabin to copy exactly the environment of the Lincoln homestead, we will introduce

A Pretty Little Lake or Pond

and an old-fashioned country well-sweep as water supplies. Hunt up a piece of broken looking-glass. This will make an excellent substitute for a miniature lake of real water, reflecting the beautiful green shore, the overhanging trees, and the graceful little craft which we will moor to its shore. If the mirror is the requisite size, its shape does not matter. Place the glass near the front of the board at the left-hand side. Move it further back, then forward, a little to this side and that, until you find the precise spot best

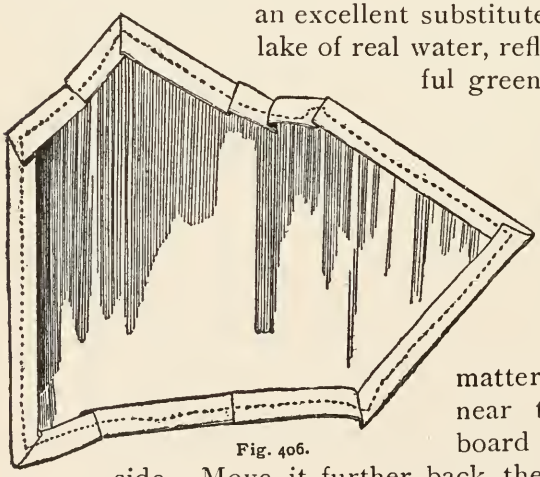


Fig. 406.

suited for the lake. Experimenting in this way, you will gain unconsciously a slight insight into the art of landscape gardening, and when you have an opportunity you will find yourself studying the arrangement and beauty of grounds laid out by professional landscape gardeners. You will notice in what direction the water lies from the house, the arrangement of the trees, if they are many or few, in groups or scattered, the surface of the land, and various other details that appeal to the close observer.

Having located the place for the lake, lay the broken mirror on it and glue a strip of paper, half of it to the edge of the glass and half to the board. Fig. 406 shows the method, the dotted line giving the extreme edge of the glass under the paper. Cover the paper with a light coat of glue and sprinkle clean, fine, dry sand over it while the glue is wet that the sand may stick fast and conceal the paper. With a lead-pencil draw two parallel lines as a boundary for

The Walk

from the house to the front edge of the board and, recollecting the old saying, "A curved line for beauty, a straight line for duty," make the path curve in some such way as

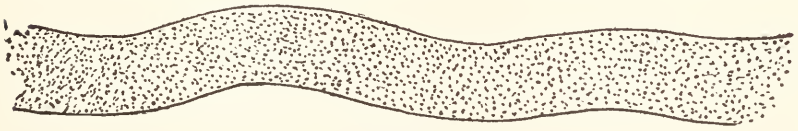


Fig. 407.

seen in Fig. 407. Extend the walk almost diagonally across to the right hand of the board. If the first lines do not give a satisfactory path, try again and again until you have the walk to suit; then, if possible, obtain sand of a yellowish color and with the aid of glue make a sandy walk.

The best place for

A Well

is toward the right hand of the land beyond the house, between it and the front edge of the board. Decide upon the exact location and over this draw a square measuring one and three-quarters inches each way as a guide in building the wall. You will need some small stones for the well, but real stones are not necessary and you may use instead irregular broken pieces of cork. These can be made to resemble hard stones by being first coated all over with glue, then covered with sand of a dark reddish hue.

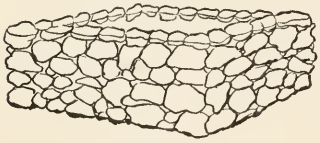


Fig. 408.

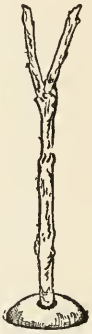


Fig. 409.

Fig. 410.

Build the square according to and immediately outside the lines in order to keep the inside space of the well large enough to allow the free lowering of the bucket. Make the walls even and straight, gluing the foundation stones securely to the ground. When the first layer of stones is in place fit in others for a second row on top of the first, breaking joints; cement the two rows together with putty. Keep on building until the walls are an inch and a half high, reserving the flattest stones for the top (Fig. 408).

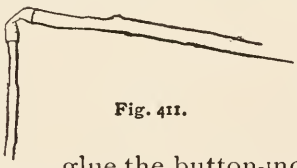


Fig. 411.

Cut a forked stick five inches long and push the end in a button-mould (Fig. 409); glue the button-mould down tight to the board at the right-hand side six inches from the well; then make a straight, slender pole five inches long from a

twig, and a well-sweep from a heavier twig. The well-sweep should be fourteen inches long and much heavier at one end than at the other. On the light end of the sweep attach the slender pole, which has previously had a hole burned through the lower end with the red-hot end of a hair-pin. Glue a small strip of brown muslin from one stick to the other, not allowing the ends of the stick to meet (Fig. 410). Wrap and glue the sides of the cloth around the two poles, forming in this way a hinge, which will allow the slender pole to hang straight down from the sweep (Fig. 411).

Tie an

Acorn Bucket

(Fig. 412) on the end of the pole, pass a string under the handle of the bucket and through the hole in the pole, then fasten securely. Pierce one of the forked ends of the stick (Fig. 409) with a pin, measure seven and a half inches from the smaller, light end of the sweep, and insert the pole sweep at this point between the forked ends shown in Fig. 413. Push the pin entirely through the sweep and the second fork of the support, where it will act as a hinge. Try moving the sweep up and down to see if it works all right.

Fig. 412.

Should the bucket drop into the well and remain there when your hand is removed from the pole, it shows that the heavy end of the sweep is too light. Remedy this by increasing the weight. Tack and glue a small box on the end (Fig. 414), resting the pole exactly on the centre of the inside bottom of the box. Fill the box with small stones until the weight is sufficient to keep that end on the ground, glue the stones in tight (Fig. 413). Now try the sweep again; pull the pendant pole down, bringing the bucket into

the well just as the real ones are worked. You can pretend that the well is very deep, containing the clearest and coldest of drinking water, and that the acorn bucket is in reality the original "Old Oaken Bucket." That famous bucket actually hung from just such a sweep as you have made, only, of course, a very much larger and stronger one.

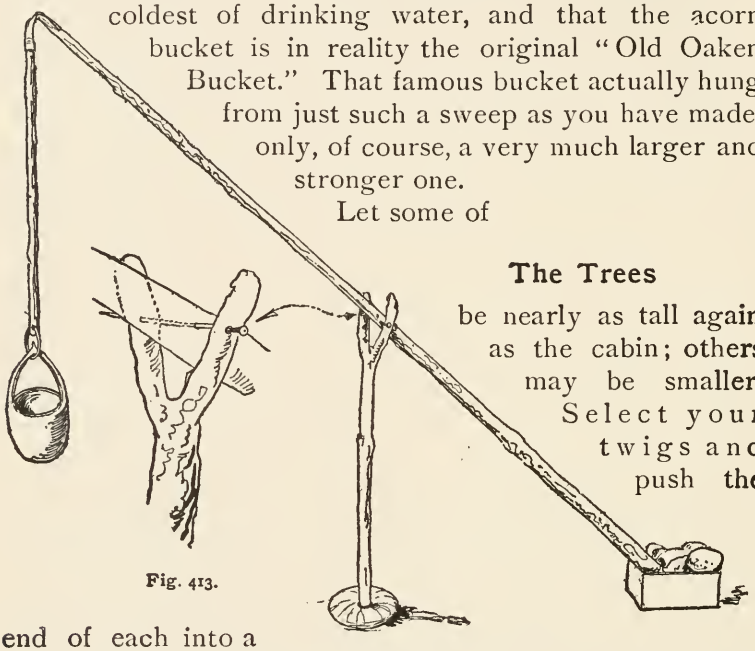


Fig. 413.

Let some of

The Trees

be nearly as tall again as the cabin; others may be smaller. Select your twigs and push the end of each into a large-sized button-mould. If the hole in the mould is too small, enlarge it. Have a few very small twigs for shrubs; stand the trees and shrubs around the grounds as you think they will look best. Try placing them in different parts of the grounds — perhaps a large tree partially back of the house would look well. When all are satisfactorily arranged mark the different spots, then take each tree and bush

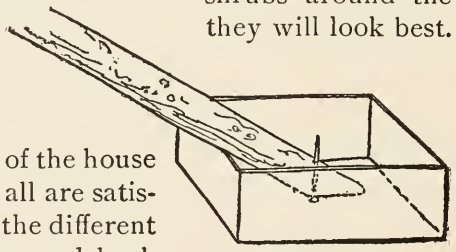


Fig. 414.

separately and cause the bare branches to burst forth into beautiful green foliage. To do this, bring out your box of

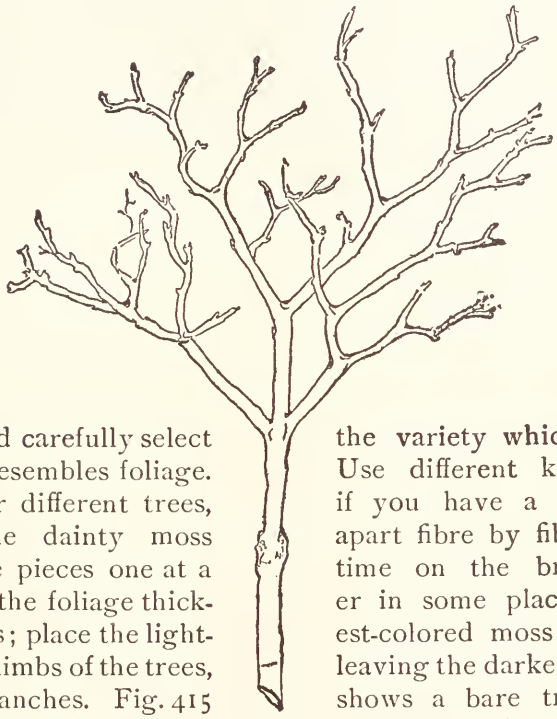


Fig. 415.

moss and carefully select the variety which most nearly resembles foliage. Use different kinds of moss for different trees, if you have a variety. Pick the dainty moss apart fibre by fibre and glue the pieces one at a time on the branches, making the foliage thicker in some places than in others; place the lightest-colored moss on the outside limbs of the trees, leaving the darker for the inner branches. Fig. 415 shows a bare tree and Fig. 416 the same in full leaf. When the trees and shrubs are ready glue them by their button-mould stands to the board.

Next the

Grass-seed Must be Sown

or the sod planted that the ground may be clothed in emerald green. Select a quantity of fine short moss and glue it down all over the entire bare land; then step back

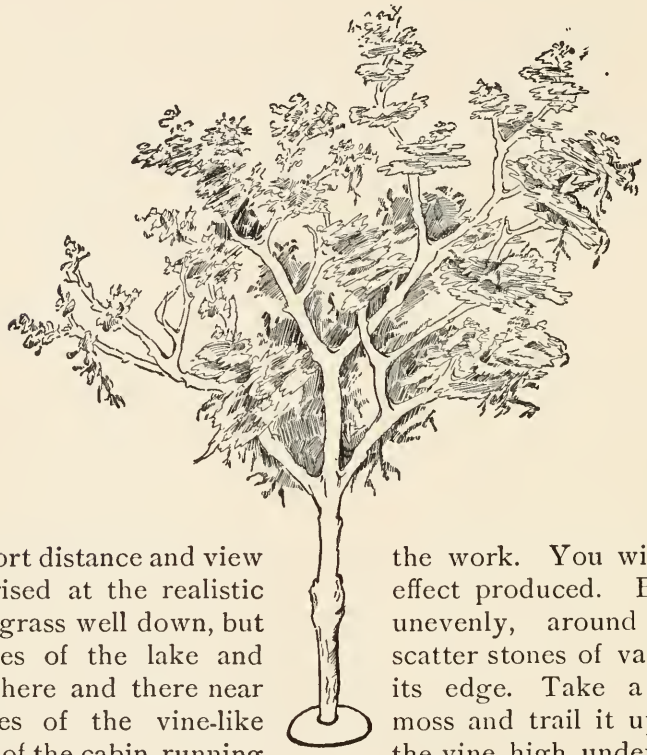


Fig. 416.

a short distance and view the work. You will be suprised at the realistic effect produced. Bring the grass well down, but unevenly, around the shores of the lake and scatter stones of various size here and there near its edge. Take a few pieces of the vine-like moss and trail it up the side of the cabin, running the vine high under the eaves.

The Fence

must be one of the picturesque zigzag rail enclosures sometimes called "Old Virginia" fences and again "snake" fences.

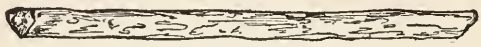


Fig. 417.

They are peculiar to America and are made of split logs. When Lincoln was a boy he excelled in splitting rails and made more and cut them faster than any of the other boys.

The rails you require, however, are so small that a girl as well as a boy can easily make them. Cut the logs four and one-half inches long and split each one lengthwise (Fig. 417). Make enough rails to lay a fence around three sides

Fig. 418.

of the grounds. The back edge of the land can be hedged in with bushes and trees. Build the fence by first placing stones—one or more, according to the size—in two rows, those in each being about four inches apart. The circles in

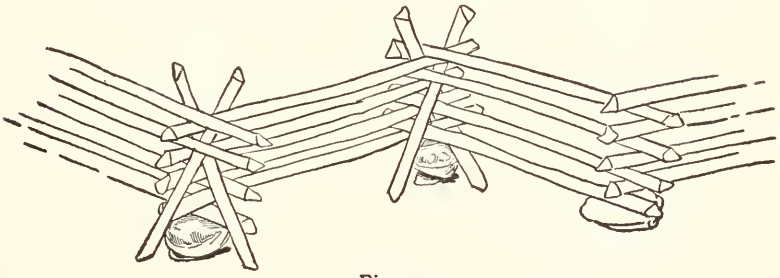


Fig. 419.

Fig. 418 give the position of the stones, and the dotted line that of the rails. Begin the fence by laying the first rail on two of the stones, the next rail across to the third stone, and so on. Make the fence several rails high; then cross two upright rails at each corner and build on the top rails (Fig. 419). Glue the stones to the ground and the rails one on top of the other as you build.

Leave an open space at the path for a gateway, but instead of an ordinary gate you can make

A Little Turnstile

which will twist around just like a real one. Choose a thick short log and shave it off level on the top; then take two thin flat sticks about two and one-half inches long; round off the corners and, crossing them at the centres, glue the two together (Fig. 420). When dry work a pin through both at the centre and push the pin down, not too tight, in the top of the log (Fig. 421). Enlarge the hole in a good-sized button-mould and fasten in the turnstile. Scrape away enough sand at the centre of the gateway to allow the button-mould to be glued to the bare board; then brush a little glue over the mould and around its edges and sprinkle with sand.

Fig. 420.

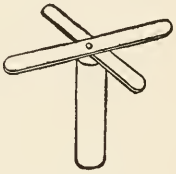


Fig. 421.

The bright-colored lichens come in well as flowers to give the

Finishing Touches.

Little tufts can be glued at the base of the cabin and chimney. The variety with the coral-red tops might be planted here and there along the edge of the walk, and other kinds could be fastened sparingly on a few rocks at the base of the well-sweep and wherever they would add to the beauty and effect of the whole. But be careful about using too many simply because you happen to have them. Study the effect of the entire scene and do not overcrowd it.

The Birch-bark Canoe.

Cut the boat from the pattern (Fig. 422); sew up the two ends and, if necessary, bend out the sides until the

canoe is of the desired shape (Fig. 423). Moor the craft to the edge of the shore with the aid of a little glue. Or you might put the canoe out on the water; glue it in place and seat two little jointed dolls in the boat, one dressed as a girl and the other as a boy. The boy should have glued to his hands a little wooden paddle whittled from a piece of thin, flat wood.

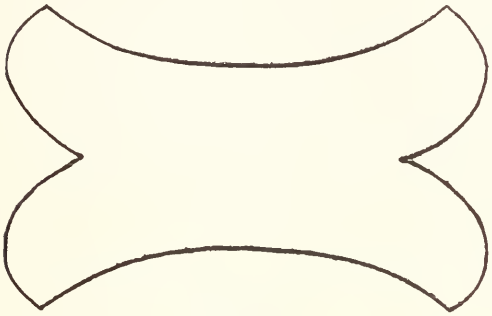


Fig. 422.

When people lived in log-cabins they burned wood in the great fireplaces and always kept a generous

Wood-pile

near at hand. A tiny one at the side toward the back of the grounds will, therefore, be in keeping with the cabin. Burn two holes through each end of a short flat piece of wood and stick a slender pole in each hole, fasten them in tight with glue, then burn two holes in another piece of wood for two similar poles. Place the two pairs of stakes about three inches apart, and cut your wood and pile it up evenly between them. The stakes are to hold the wood in place (Fig. 424).

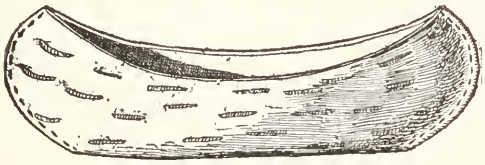


Fig. 423.

A Sawbuck

can be made of four flat pieces of wood and one round piece. Shut your eyes, think hard, and you will remember

how a real sawbuck looks; how the cross-piece is nearer the top than the bottom and how each side-piece forms an awkward-looking X, the cross of the letter being above the

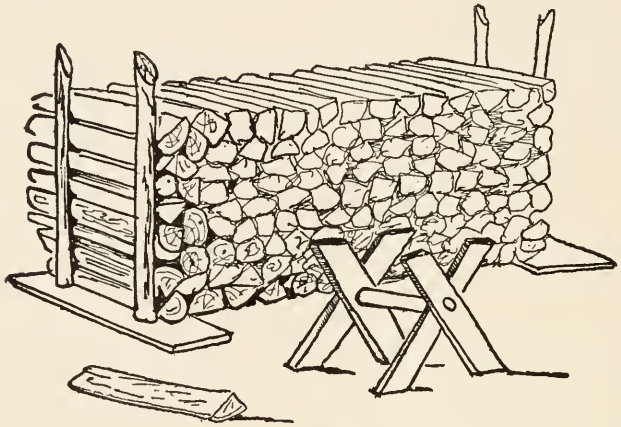


Fig. 424.

centre. You can make it without diagrams. Look at the sawbuck near the wood-pile in Fig. 424 and try.

Find a tiny doll, dress it like a child and glue it in an upright position on the walk. Have another doll (neither of these should be jointed) dressed in a way to represent the little one's mother, standing by the well drawing water, and your charming old-fashioned log-cabin home will be finished. See illustration of An "Abe" Lincoln Log-cabin.

You might be drawing the simple designs.

CHAPTER XVIII

QUEER THINGS ON PAPER AND BLACKBOARD AND HOW TO PUT THEM THERE

LOOK at a piece of blank paper or, better still, stand before an unmarked blackboard and try to imagine pictured on its surface whatever you would like to see there. It might be a comical little turtle, a rose, or perhaps a graceful swan. If you knew exactly the true shape and proportion of the objects you could draw them, but as soon as you attempt the sketch you realize that you cannot remember just how these creatures are formed, and consequently you are unable to depict them. Do not be discouraged, for there is a way in which you may do the work easily and that is by reducing the realistic drawing to a few leading lines, and the girls who are able to sketch even a small number of simple objects in this way have resources within themselves both for diversion and development, worth much more than they are apt to understand.

If you would like to put on paper or board

A Funny Little Pig

as it stands with its ears bent forward and nose in air, draw a horizontal line (Fig. 425). On the right-hand end of this extend down a short vertical line (Fig. 426); on the left

draw another vertical line parallel to but longer than the first (Fig. 427). Draw a bottom horizontal line not quite as long as the top one (Fig. 428); then connect the two loose

Fig. 425.

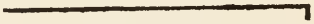


Fig. 426.

ends by a slanting line (Fig. 429). Make the letter V inverted and slightly tipped for the ear (Fig. 430); put a dash in front of the ear parallel with the top line for the eye, and a

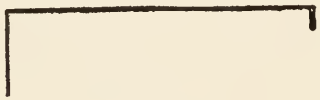


Fig. 427.

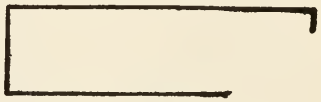


Fig. 428.

little loop at the back for a tail (Fig. 431). Add two short straight lines to serve as legs on the far side of the pig, making them touch but not pass the bottom line (Fig. 432).

Fig. 429.

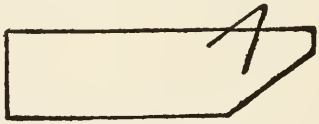


Fig. 430.

Next put in the other two legs on the near side of the animal, extending them up a trifle beyond the bottom line and down a little lower than those on the far side (Fig. 433). There! the pig is all attention, listening to the welcome sound of the children's call and ready to start for his dinner! Now make the little animal as he appears when satisfied and trotting off contentedly. Draw the body as

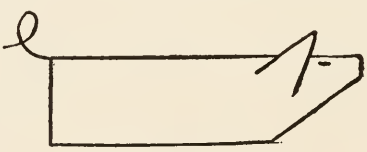


Fig. 431.

for the first pig, but turn it upside down (Fig. 434), then add the eye, ear, tail, and legs. Slant the eye with the head line and point the ear downward toward the left (Fig. 435). In these lines forming the two animals you have produced expressions; in the first, expectation; in the second, contentment, and you have also suggested character, by giving the principal distinctive lines of the pig.

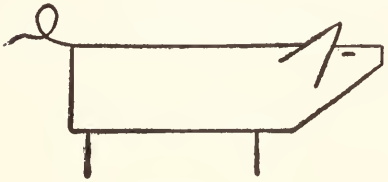


Fig. 432.

When you see a picture of a pig, or the live creature, try to find the lines which you have drawn. To do this, first get an idea of the general line forming the back, omitting all the little ups and downs and curves — in other words, all detail. Then proceed in the same way with lines forming the rest of the animal. Do not allow yourself to be confused by the amount of detail; keep to the principal parts and you will gain some idea of the form of the object.

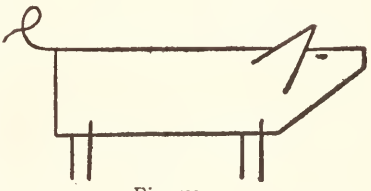
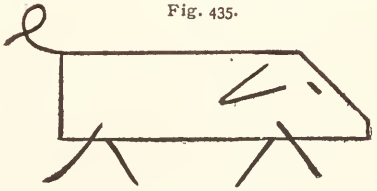


Fig. 433.

Fig. 434.

Fig. 435.



In the same way look at the governing lines of

A Hen

and you will discover that if a triangle be drawn with the straight line, or base, uppermost and the point down at the

bottom, it will give the characteristic outline of the hen by adding simple outlines of head, tail, and feet. But the leading lines are not necessarily straight and angular; they are often entirely of curves—the kind of curves boys and girls delight to cut in the ice while skating, and which Old Ocean marks upon the sand in summer, using brushes made of waves.

Did you ever notice how many beautiful curves exist in

The Queen of Flowers, the Rose,

the national flower of England? Examine the blossom and endeavor to take in its beauty. A question often asked in one of the games of children is this: "Which would you rather have, a gold rose or a gold lily?" and the bewildered young prisoner scarce can choose, so impressed is she with the desirability of possessing, if only in imagination, both rose and lily, little dreaming that once a year a rose of the purest gold is actually made and given by the Pope to an Empress, Queen or royal princess belonging to the Roman Catholic Church. The rose you can make will not be of the precious metal, but of chalk or lead from a pencil, and you need not wait to present it to a royal personage, but may give it to whom you please. Begin with a circle (Fig. 436).

Fig. 436.

Fig. 437.

Fig. 438.

Fig. 439.

Fig. 440.

Draw it as perfect as possible, and within its border place one curved petal (Fig. 437), another (Fig. 438), a third (Fig. 439), a fourth (Fig. 440), and two more (Fig. 441). Fill the circle up with petals as in Fig. 442, then on the outside of the circle make six more (Fig. 443); to these add four on the outer edge (Fig. 444). Now you may go over all the lines, making them somewhat irregular, as in Fig. 444. Draw a stem to the rose, add a few thorns and on the right-hand side of the stem attach a branch of green leaves according to the copy. The easiest way to sketch in the leaves is to first draw the mid rib or central line which reaches from the point of the topmost leaf to its juncture with the stem of the rose. When that line is made draw two more, branching out on each side of it. These lines form the skeleton of the leaves, and all one has to do to finish them is to commence at the tip of each line and draw a curve to its base, first on one side, then on the other, to form the leaf.

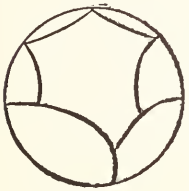


Fig. 441.

Fig. 442.

Fig. 443.

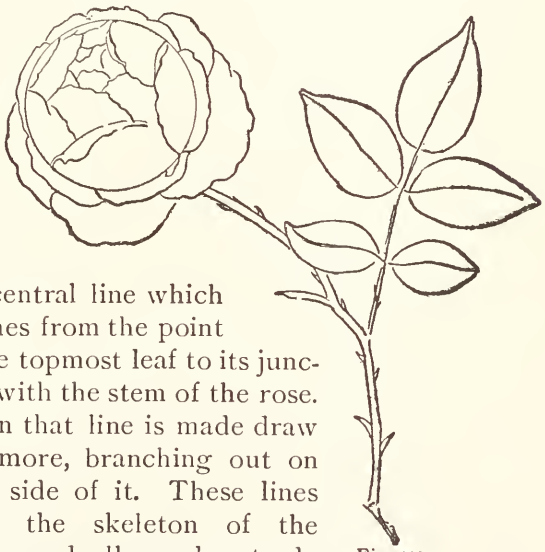


Fig. 444.

Is not that easy? Should the work be incorrect the first

time, do it over again and again. Only little animals are born with a knowledge of all they are required to know; people must learn everything, even how to walk. Remember that the women and men who seem so skilled and wise had to learn by repeated trials, just as you are doing now.

Rub the marks off the blackboard or get a fresh piece of paper and we will put a face on it—one that, after you have once drawn it, you can almost sketch with your eyes shut, so simple is the work. Possibly you do not know that the general outline of

Fig. 445.

Fig. 446.

A Head

is egg-shaped. Make an egg-shaped outline, using the large part for the top like a balloon (Fig. 445). Draw two curves on the egg for the eyebrows just above the centre of the face (Fig. 446); make two smaller curves under the eyebrows and exactly in the centre of the face for eyes (Fig. 447); another curve midway down between the eyes and the bottom of the chin for the nose (Fig. 448), and a last one below the nose to form the mouth. See how supplicating the face looks! You know how he feels—the boy wants to go to the circus (Fig. 449).

Fig. 447.

Fig. 448.

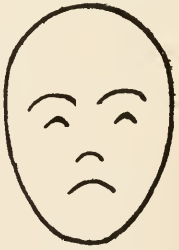


Fig. 449.

Reverse the order of the lines and the expression will be entirely different. Turn

Fig. 450.

the curves which form the features the other way by bending them downward instead of upward (Fig. 450). The boy is now thinking of the lesson he did not learn.

Fig. 451.

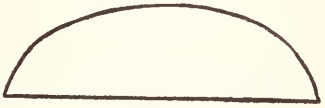


Fig. 452.

Fig. 453.

Fig. 454.

The Three Blind Mice

who ran so fast when the butcher's wife went after them can also be drawn in a simple manner. Make a curve (Fig. 451) and draw a straight line from end to end (Fig. 452); add ears (Fig. 453), eye and whiskers (Fig. 454), a tail (Fig. 455), and the legs and feet (Fig. 456). Draw three mice all alike in a row. Again, make Fig. 452 to form the body of

Fig. 455.

A Fish.

Sketch in the gills (Fig. 457), the eye and pectoral fin (Fig. 458), the dorsal fin (Fig. 459), and tail (Fig. 460); then make the scales

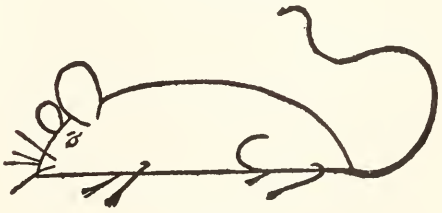


Fig. 456.

Fig. 457.

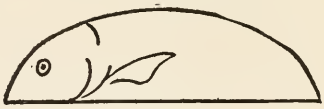


Fig. 458.

by first drawing parallel curved slanting lines over the body of the fish (Fig. 461) and crossing them with others

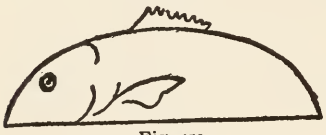


Fig. 459.

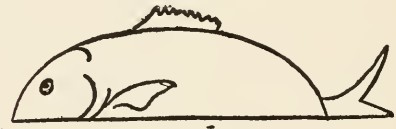


Fig. 460.

(Fig. 462). Indicate the water with a few short lines (Fig. 462).

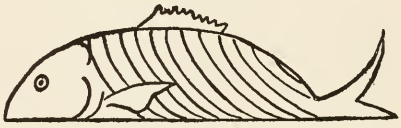


Fig. 461.

Turtles

are slow creatures, but they are interesting travelling about with their houses on their backs. Did you ever have one for a pet? They are very quiet, not at all troublesome, and make fine pets for girls. It may be that you have never seen a geographic turtle. We will draw

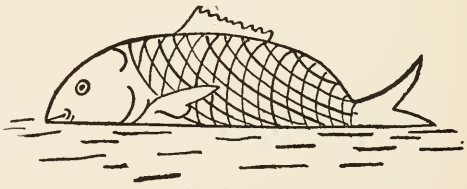


Fig. 462.

Fig. 463.

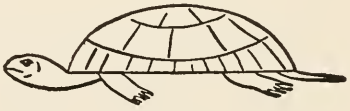


Fig. 464.

one, and that will impress it on your mind. Take the same Fig. 452 to form its back, mark as in Fig. 463, then give

the turtle a head, in form something like that of a snake. Draw the eyes and mouth distinctly and add the feet and tail (Fig. 464).

Here is something easier to draw than any of the other objects.

Make a Duck

without raising the pencil from the paper. Commence at the left-hand starting-point and draw a line sidewise, running it slightly downward (Fig. 465). Turn the line up and cross it over, making a loop at the right-hand end (Fig. 466). Continue the line to the other side and turn it up into another loop under the starting-point (Fig. 467). Keep on crossing from side to side, looping the line each time until you have made Fig. 468; then draw the line up and around the loops as in Fig. 469 to form the wing. Next make similar loops, according to Fig. 470, for the tail. At the last loop draw the line across under the duck's wing, stretching it up in front (Fig. 471). This gives the lower portion of the head and beak. Continue the line to make the upper part of the head (Fig. 472). One more trial and you will probably be able to draw the bird rapidly without once raising the pencil or chalk from the surface of the paper or blackboard. Let the duck swim in the water by drawing a few swirling lines around it as in Fig. 473.

Fig. 465.

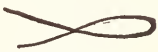


Fig. 466.

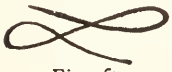


Fig. 467.

Fig. 468.

Fig. 469.

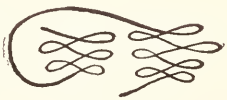


Fig. 470.

Young people often have an intense enthusiasm at dif-

ferent seasons for different sports. At one time it may be hoop rolling, when every girl must have a hoop, even if it be one from a barrel. Again, pin-wheels claim attention, and the stores are besieged for bright-hued paper and all the girls and boys work hard over the pretty whirling toys, talking of the many colors, sizes, and number of their special designs. Somewhat after this fashion the grown people in Holland had at one time a craze, not for a toy but a flower—the brilliantly colored tulip—and these older girls and boys often spent many dollars for one plant, vying with each other in their endeavors to obtain rare varieties.

Fig. 471.

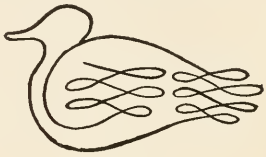


Fig. 472.

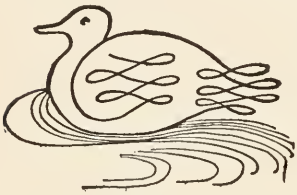


Fig. 473.

Though often gorgeous in color

The Tulip

is very simple in outline. In one stroke draw Fig. 474, make a corresponding curve on the other side (Fig. 475), forming an oval standing on end; this is one petal. At the right-hand side, from near the top of the petal, run a short, slanting curved line upward and outward (Fig. 476) and connect the end of this line with the bottom of the oval by a reverse curve, making the petal point outward at the top (Fig. 477). Duplicate the petal on the left-hand side, making three visible petals (Fig. 478), most of the other three being hidden on the far

Fig. 474.

Fig. 475.

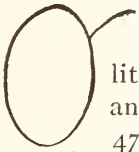


Fig. 476.

side of the flower. Form the tops of the back petals by drawing three little tent-like points, one on each side and one back of the central petal (Fig. 479, A, B, C). Add the stem by drawing two straight lines down from the

Fig. 477.

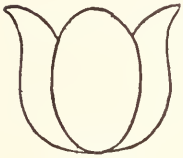


Fig. 478.

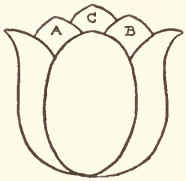


Fig. 479.

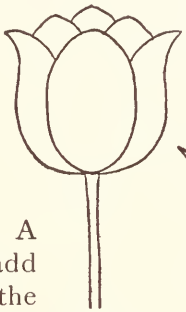


Fig. 480.

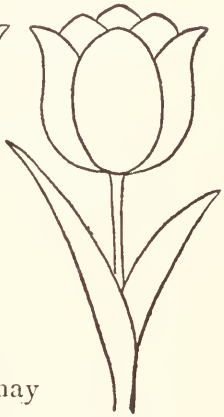


Fig. 481.

bottom of the oval (Fig. 480). A short distance from the flower add two long, pointed leaves on the stem, curving them somewhat after the manner of the side petals (Fig. 481).

There are other flowers whose outlines may be drawn in this simple manner. Try the

Common White Field Daisy

with its golden centre. First draw a small circle to represent the centre, and as the texture of its surface is slightly rough or velvety, differing in this respect from the surface of the white petals, indicate the difference by covering the centre with tiny dots. From the edge of the centre sketch in the petals of the flower by drawing, for the sides of each one, two long, curved lines which start from the round dotted centre and end by meeting at the outermost tips. Make a number of petals extending entirely around the circumference of the centre. Let them radiate out in all

directions as the spokes stand out from the hub of a wheel, being careful to have the petals about the same length, that the daisy may be circular in form and not uneven.

Always make the designs large in size, drawing the lines in with free, easy sweeps of the wrist and arm. Never allow your work to become cramped; move the pencil or chalk deliberately and think what you are going to do before starting. Satisfy yourself as to where you are to begin and where you are going to stop; then do your best.

The duck of fancy loops (Fig. 473) does not portray the characteristic lines of the bird. Such was not the intention; it is merely given for the fun of twisting the lines into the form of a duck, so that you may be able to say, "I can draw a duck without taking the pencil from the paper. Watch me!" Then you draw it for the benefit of your friends.

If you can get a blackboard or a piece of blackboard cloth and tack it over layers of paper on the wall, you might give

A Little Parlor Entertainment

by drawing the simple designs you have learned, and perhaps others you can work out for yourself as you stand before your friends. There is a certain fascination in watching anyone sketch and seeing lines which appear to be without meaning develop into familiar objects. Try the idea with a few friends or the members of your family. As you sketch the objects tell in an easy, natural manner anything and everything you know about them. And before you are aware of the fact you will be giving others a delightful half-hour, besides enjoying it yourself.

CHAPTER XIX

HOME-MADE MUSICAL INSTRUMENTS

GIRLS, do you know that music lies hidden all around you, needing only the right touch to bring it forth? That everything is said to have its keynote, from a big bridge to a little wooden bench, and that when the keynote is struck the object will vibrate perceptibly? A

Blank Piece of Paper

does not suggest music in any form, and yet you can draw many and various notes from it. Cut a strip of writing-paper like Fig. 482 and whittle two pieces of wood according to

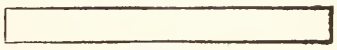


Fig. 482.

Fig. 483.

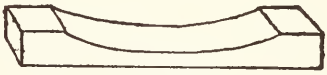


Fig. 484.

Figs. 483 and 484; make the wood a trifle wider than the paper. Place the paper between the bits of wood (Fig. 485) and, holding the instrument tight between your teeth, blow through it; keep on blowing until it whistles like the wind.

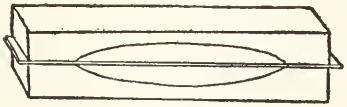


Fig. 485.

Of course you should have a number of different instruments in the orchestra you intend to organize, so that each girl may play on her own special instrument. For the next one, try

A Harp.

Harps were valued highly in ancient Egypt, and later in other countries, some of which still retain them. Modern musicians, like Meyerbeer, Gounod, Berlioz, Liszt, and Wagner, understanding the worth of the harp, introduced it in their music. Our instrument may not be as graceful in form, but you can have more real fun with it than you

Fig. 486.

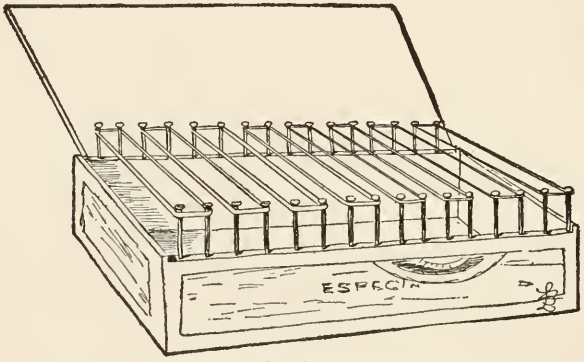


Fig. 487.

Fig. 488.

could with any of the big, costly affairs. Get some elastic bands and a deep, empty cigar-box; drive slender nails at intervals along the front and back edges of the box; then take ordinary elastic bands (Fig. 486), and stretch them across the box by slipping each one over two back and two front nails. The elastics must be of various widths; place the heaviest at one end of the box and graduate up to the

lightest at the other (Fig. 487). With a quill (Fig. 488) test the instrument. You can tighten the elastics by looping them around and around one or more of the four pins; in this way the strings may to a great extent be keyed as you wish. Practise on the musical box with the quill toothpick until you can make the elastics sing a tune, then put the harp carefully aside where it will not be broken, and hunt up a piece of wood for a modern

Dulcimer.

Have the wood about an inch thick: on the top of it, lengthwise through the centre, draw a straight line as a guide. Along the line drive common white pins graduated in size, placing the largest at one end and the smallest at the other (Fig. 489). If you can only get pins of one size, graduate their height by sinking some deeper in the wood than others. To do so without danger of bending the pins, first make shallow holes with a large strong pin by screwing it into the wood; a hat-pin will answer the purpose. Should you happen to have heavy nippers, the pins may be all of the same height, and you can pinch off their tops, causing the row to slant down from one end to the other. All being ready, touch the pins lightly with the quill toothpick, running the scale first up, then down, the entire length of the pin row. After a few trials you will be able to play some simple airs on the pin keys.

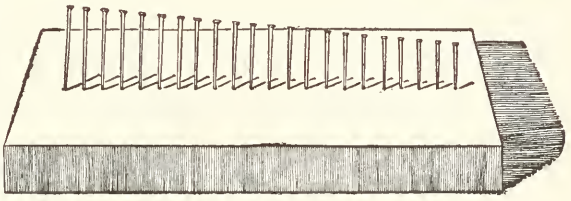


Fig. 489.

Doubtless most of you have seen bells of glass which

may be rung like those of metal, but probably you have have never tried bringing

Music From Every-day Glass Finger-bowls

and drinking-glasses. Try it. Collect as many different kinds of glasses as you can find, the thinner the better. Place them on a wooden table (Fig. 490) and with a wooden hammer made by pushing an empty spool on one

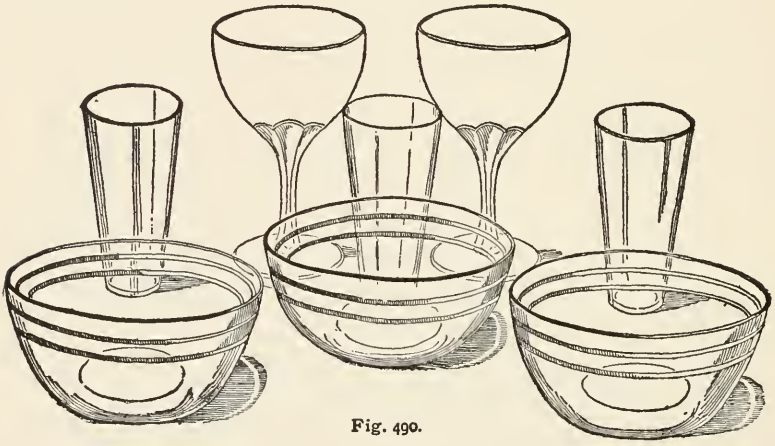


Fig. 490.

end of a lead-pencil (Fig. 491) gently strike first one glass then another to find the different tones. Having ascertained these, make the glasses give forth the simplest chimes of the church bells. But do not stop here; experiment until you are able, with various taps, to bring out more music than you at first imagined possible. Let the glasses, like Tennyson's happy

Fig. 491.

bells, "ring out the false, ring in the true." The same poet in "Locksley Hall" has the speaker ask his comrades to "sound upon the bugle-horn" when they want him. Few girls will ever try their powers on a real

Bugle-horn,

but all can readily make a twig sound an alarm. Get a piece of ordinary willow-tree (Fig. 492). Be sure it is flaw-

Fig. 492.

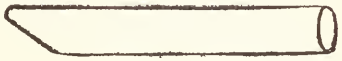


Fig. 493.

less and perfect; with a sharp knife slice off a slanting piece at one end (Fig. 493), then cut a notch in top (Fig. 494). Gently tap the bark all over with one end of a penknife in order to loosen it from the wood. After carefully removing the bark without breaking it, cut the wood according to the dotted lines in Fig. 495, which will give Fig. 496. The wood is now ready to slip back into the bark, but before

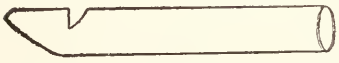


Fig. 494.

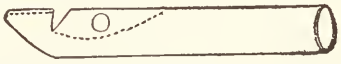


Fig. 495.

Fig. 496.

Fig. 497.

doing so place a pea in the hollow part (Fig. 495); then slide the bark back in place (Fig. 497). Now blow the twig and sound the alarm.

A roast of beef hardly seems promising in a musical way, and yet the roast, though it looks so sober and quiet,

can help you with the orchestra. Save the smallest two of the long, flat

Bones

(Fig. 498) and, after cleaning and drying them, hold both in your right hand, one bone between the first and second finger, the other between the second and third, so that the convex or outward curved sides lie next each other and the top ends of the bones extend slightly beyond the knuckles. Then double up your hand, holding the first bone securely, the other loosely, and in this position give your hand a quick twist and jerking motion, causing the loose ends of the bones to come together with a click, click, clickity, click. The bones should not be cooked, as too much heat will crack them.

Fig. 498.

Another home-made instrument of music is the

Crystal Flute,

fashioned of small bottles. Any kind of bottle which sounds well when you blow into it will answer the purpose. Use coarse darning-cotton to sew the bottles in a row on a strip of pasteboard, commencing with the deepest toned and leading up to the highest toned (Fig. 499). Place the flute against your lower lip and blow into the open mouth of the bottle. Continue blowing as you move the instrument along,

sounding each bottle in turn. After a few trials you can manage the crystal flute well enough to have all the bottles join in the grand chorus of the musical jubilee you intend to give with the home-made instruments.

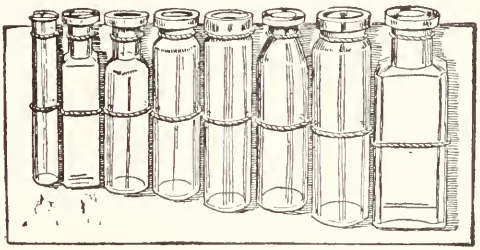


Fig. 499.

A little ingenuity will enable you to made a fine fiddle, strings and all, of a common field corn-stalk, and a good flute may be manufactured from a section of an ordinary pumpkin vine. Naturally you must think a little over the matter before you will be able to solve the problem.

Take some hollow door-keys of different sizes and use them to play on; they are well worth trying, because a hollow door-key, when blown into, will give much the same sound as a bottle. You might add the keys to your collection of instruments.

Even an

Ordinary Comb

can do duty as a musical instrument. Over one side of the comb lay a piece of common white tissue-paper; then hold this queer instrument to your lips, allowing the paper to come between the comb and your mouth; blow against the paper with lips gently parted somewhat as one blows on a horn or rather on a harmonica. Should the comb not respond at once, try again; when the secret is once learned, there is no limit to the tunes which may be played.

For giving a queer whistling noise there is scarcely anything better than an ordinary broad

Blade of Grass

laid lengthwise between the entire length of the two thumbs, one end of the grass extending beyond the tops of the thumbs and the other below at the wrist line.

Certain tribes of people are experts in forming

Sea-shells

into musical instruments, but for you the shell need not be altered. Take it as it is, and holding the pretty thing to your ear, listen while the shell tells of the far-away blue sea, which, singing gently, imparts to her children, the shells, power to transmit the sound of murmuring waves to those who will listen to the voice.

Fig. 500.

The Musical Fountain

is one of the prettiest and most interesting experiments and is a very simple one. Remember, you must use a goblet for the purpose, not a tumbler, as

the latter will not work well. Choose a goblet of very thin glass, fill it almost full of water, dip the end of your finger in water and rub the edge of the glass quickly around and around until it rings with a humming sound. You will soon find the surface of the water shivering and wrinkling up its face in tiny waves, then it will become greatly agitated, sending up wee streams and drops of water. Wet your finger again and keep on with the circular motion until a little fountain of fine spray shoots up into the air, accompanied by the musical sound from the glass (Fig. 500).

CHAPTER XX

WHAT TO MAKE OF EMPTY SPOOLS

GATHER up all the spools you can find, big, little, thick and thin; no matter how many, you can use them all. There is no end of fun to be had with these always-on-hand, easily found toys; they may be made into almost everything. Tell your mother that you can build

The Parthenon

if she will give you enough spools, and see her smile at the very idea. But say you are in earnest and ask her not to look until you call "Ready." Then go to work and surprise her with a miniature representation of one of the most beautiful temples ever built. Begin by standing four spools in a row for the first side of the building, allowing about the width of a spool between each two. Place eight in a row for the second, four for the third, and eight for the fourth side. Have the spools all of the same size, that the walls may be alike and perfectly even, because, as you know, the walls are to be formed of columns, not as many as in the original, but enough to give an idea of the Greek temple. Build up the spools three deep into pillars; then lay a piece

of pasteboard on the top of the columns for a ceiling. Bend another piece of pasteboard lengthwise through the centre for the roof, and stand it tent-like on top of the ceiling. You can measure the correct size of the ceiling by laying a piece of pasteboard down flat on the floor along the eight-columned side of the Parthenon to obtain the length, and placing it flat on the floor across the four-columned side to mark the width. Make the roof the same length and a little wider than the ceiling to allow for the height of the bend through the centre.

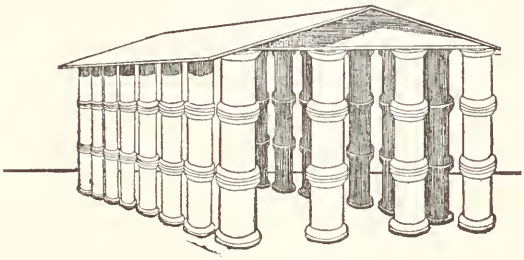


Fig. 501.

Now let your mother see

The Little Greek Temple

(Fig. 501) and tell her that she must imagine a space immediately beneath the roof filled in with the most beautiful statuary she can think of, that the spools are white marble columns and she should see, in fancy, another row of stately columns inside the ones you have built. Your mother will be greatly interested and can tell you all about the real Parthenon, and probably will hunt up a picture of the temple that you may see just how near you came to making the little model look like the wonderful Parthenon, on the Acropolis, in Athens.

After admiring the building for a while, pretend that a left-over spool

Is a Venetian Shell

shot from a cannon, and toss it gently against the roof at one end of the temple; then see the columns totter and fall, leaving only a portion of the Parthenon standing, in the same way that the real marble columns fell when the original structure was shattered and practically destroyed by the soldiers.

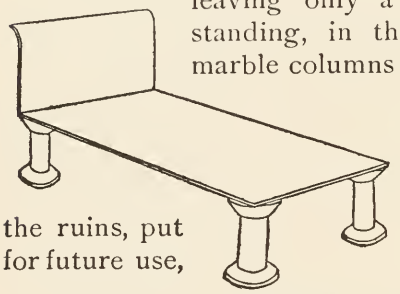


Fig. 502.

Take all the spools from the ruins, put away the ceiling and roof for future use, and make the spools into

A Set of Furniture.

Use four for the legs of a bedstead, place them in position and lay a piece of stiff white paper, bent up at one end, on top of the spools. The bed will then be ready for the doll (Fig. 502).

Fig. 503.

A table can be made in a moment's time. Choose a large spool (Fig. 503) and place a round piece of paper (Fig. 504) on the top (Fig. 505). For chairs use spools with bent pieces of paper for seat and back. Make the bureau of six spools close together in two rows of three spools each and cut the top of a piece of paper with a high extension in the centre which you must bend upright for a mirror. The

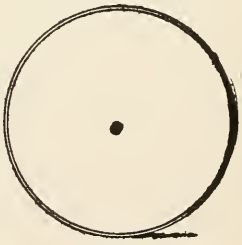


Fig. 504.

Fig. 505.

wash-stand can be four spools quite close together covered with a piece of paper. A piano is easily made, but you must think it out for yourself. Use a small spool for the piano stool.

The Lamp

(Fig. 506) is a spool with a little roll of white paper shoved into the hole and a circular piece of paper crimped around the edge for a shade. Unless you need the spools to use again in other ways you might paste the paper on tight and make a lamp which will not come apart, and you could also glue the top on the table and the seats on the chairs. This is not necessary, however, for if you are careful and do not knock against the furniture, it will remain secure.

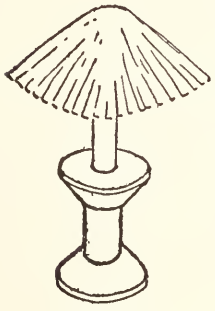


Fig. 506.

When enough furniture has been manufactured for the patient little dolls who have been waiting all this time, give them a present of

A Wagon

in which they can enjoy the fresh air. Cut Fig. 507 from heavy paper or card-board that will fold without breaking. Bend all the dotted lines and cut all the heavy lines in the pattern. Push a burnt match, or a wooden tooth-pick, through one hub, then through an empty spool and

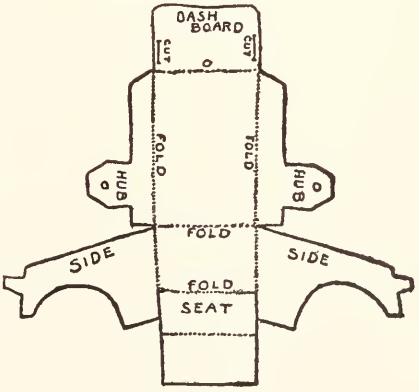


Fig. 507.

the second hub. The spool forms the wheels. Screw a small pin cautiously through each of the two projecting ends of the match, piercing the wood and leaving the head and point of the pin standing out (Fig. 508). Tie a knot in the end of a string to prevent its sliding out and thread it through the hole in the dash-board (Fig. 508). Help the dolls into the vehicle and take them for a ride.

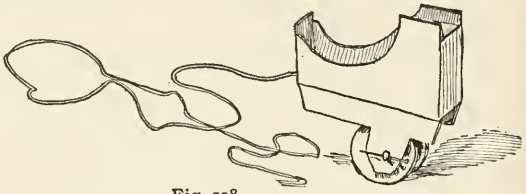


Fig. 508.

Next build

A Memorial Arch

(Fig. 509) something like the one which was erected in New York City. Commence with two groups of spools a short distance apart; have three in each group, two in the back and one in the front. Build up columns four spools high; then lay a strip of pasteboard across from one to the other. On top of the pasteboard place two more groups of smaller spools a little nearer together than the first groups. Make these columns two spools high and crown each with a single spool decorated with a bright-colored

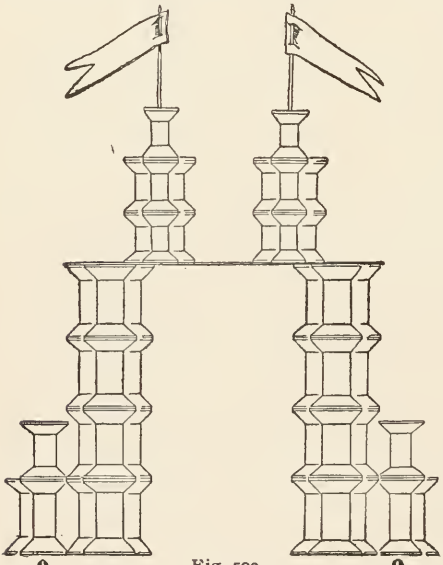


Fig. 509.

paper flag fastened on a slender stick pushed down in the spool. At the base of the arch add three more spools on each side (O and O, Fig. 509), and the famous structure will be completed. This is not exactly like the original, but for a spool arch it is fine, and a spool procession will feel honored to march through it.

You might make bridge piers of spools and use a strip of pasteboard to form the several spans; then the procession could cross the river safely and march on the other side.

Did you ever

Blow Bubbles with a Spool

— beautiful bubbles, which float and glide in the air with all the charm of clay-pipe bubbles? Mix strong soapsuds, dip one end of a large spool in the water; wet the spool, then blow. If the bubble refuses to appear, dip the spool in the water again, put your head down to the spool and blow a few bubbles while the spool is in the water, then quickly raise it and try again.

Fig. 510.

Nine times out of ten you will succeed, and a bubble will swell out from the spool as in Fig. 510. These wooden bubble-blowers last a long time, with no danger of breaking when accidentally dropped on the floor, and you may always find enough to provide each of your playmates with one when you meet for a trial of skill in bubble-blowing.

After you tire of this sport try the

Pretty Winged Creatures.

Cut a butterfly (Fig. 511) from bright-colored tissue-paper or thin writing-paper, bend at dotted line and paste on the large end of a very small cork. Fit the small end of the cork in top of the hole of an empty spool (Fig. 512). Then blow through the spool and see the butterfly ascend rapidly to the ceiling and float down again. If you could make several different colored butterflies, you might invite some young friends to help you fill the room with the pretty winged creatures.

Fig. 511.

Fig. 512.

Take another empty spool and stick a common wire hair-pin partially into the hole, bend the hair-pin slightly down against the edge of the hole, do the same with three more hair-pins, and you will have a spool with a funnel-like opening of hair-pins at the top (Fig. 513). In the funnel place a small, light-weight ball made of a crushed bit of bright paper wound around with thread. Raise the spool to your lips and blow gently (Fig. 514). The ball will rise and fall in mid-air, in the same way that you have seen one of rubber dance at the top of a small fountain or jet of water.

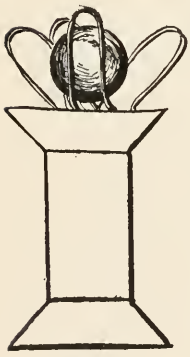


Fig. 513.

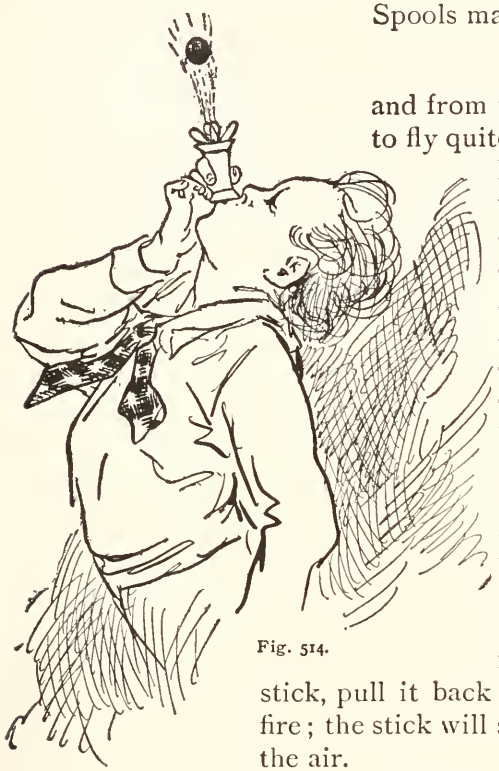


Fig. 514.

Spools may do duty as

Cannon,

and from them sticks be made to fly quite a distance. Select a large-sized spool, cut the rim off one end, cut two dents, one on each side of the shaved end of the spool, and then tie over this end a piece of black cotton elastic. On each side tack a large button-mould; these serve for wheels and also cover the fastening of the elastic. Paint the cannon black, and it is ready for use. Insert a stick, pull it back with the elastic, and fire; the stick will shoot swiftly through the air.

There are many other toys, besides useful articles, which can be made of empty spools. Find out by experimenting what they are, so you may have the triumph of originality. of making things which differ from articles made by others.

The empty spools do not cost money, nor does the pasteboard from old pasteboard boxes, yet they may furnish more genuine enjoyment than could be derived from the most expensive toys.

CHAPTER XXI

CHRISTMAS DECORATIONS

HEN the air is cold and frosty, and people move quickly through the streets, stopping to loiter only in front of the shop windows; when groups of merry girls hurry along on their way to school, their cheeks, glowing rosy under the brisk greetings of a northwest wind; when the evergreens displayed for sale upon the sidewalks send forth a spicy odor which ascends like incense and the very atmosphere seems pulsating with pleasurable excitement, there is no need of a calendar to tell us that the holidays are close at hand. As surely as a cloudless sky betokens a fine day, so surely do these signs indicate that Christmas will soon be with us.

Purse-strings, even if kept tightly drawn the rest of the year, are loosened now, and money is spent freely and ungrudgingly, not only for gifts, but also for Christmas greens with which to decorate and beautify the home.

Stars, wreaths, and ropes of evergreen and holly will soon adorn the interior of almost every house. There are

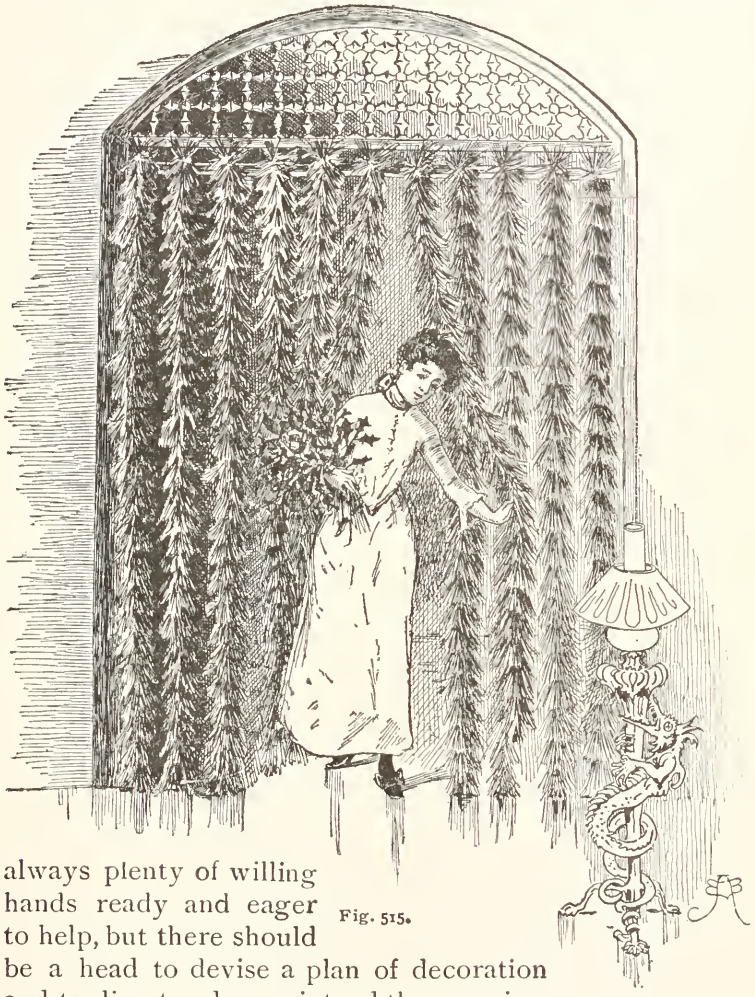


Fig. 515.

always plenty of willing hands ready and eager to help, but there should be a head to devise a plan of decoration and to direct and superintend the carrying out of the idea; for there is no necessity for festooning a room and hanging up stars and wreaths in the same way

year after year. A great variety of new designs may be made.

For instance, Fig. 515 shows a beautiful and

Effective Portière

composed simply of ropes of evergreen fastened to the curtain pole by looping one end of a rope over the pole, bringing it down and tying it securely to the same rope just under the pole. Each piece is fastened on separately and hangs loosely down.

Fig. 520 is a

Star and Shepherd's Crook

Fig. 520.

grouped to form a pretty wall decoration, the design symbolizing the star of Bethlehem and the shepherds who, watching their flocks by night, heard the angel chorus "Peace on earth, good-will toward men."

Make the star of five flat sticks (laths will do), two and a half feet long, and put them together as shown in Fig. 521; then cover the frame with holly so that none of the wood is visible. Make the crook of a broomstick, to which fasten with strong twine, or flexible wire, a piece of rather stiff wire bent in the shape of

Fig. 521.

Fig. 522.

Fig. 522. Wrap evergreen closely around the wire and stick until every bit is covered and it looks like one piece. Then place the crook behind the star and wire or tie it in place.

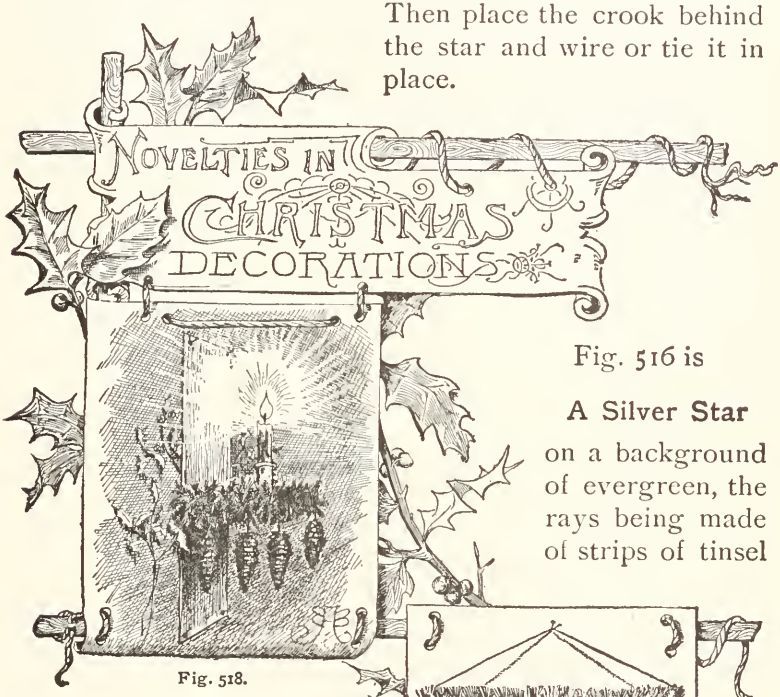


Fig. 518.

Fig. 516 is

A Silver Star

on a background of evergreen, the rays being made of strips of tinsel which is sold for decorating Christmas-trees. The frame for the background is made like Fig. 517, and should be about two feet square. Over this frame stretch ropes of evergreen, close together, and fasten with tacks at each end. Cut the

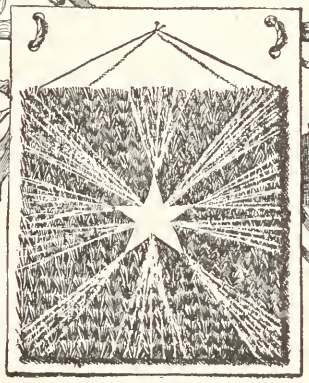


Fig. 516.

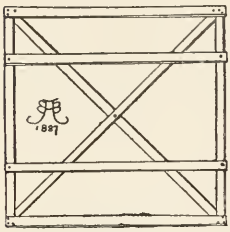


Fig. 517.

star from card-board, cover it with crumpled tin-foil and fasten to the centre of the frame with a small nail. Sew tinsel threads on the points of the star before it is secured to the background; then when the star is in place spread out the tinsel in straight rays and fasten it to the frame as shown in illustration (Fig. 516).

Fig. 518 is a design for

A Sconce

upon which one or more candles may be placed. The tin which forms the back of the sconce reflects the light and produces quite a brilliant effect.

Nail a block of wood one and one-half inches square to a piece of tin seven inches wide and fourteen inches long (Fig. 519). Silver or gild a number of pine cones and hang them from the lower edge of the block; then tack evergreen around the three sides as shown in illustration (Fig. 518). Fasten the sconce to the wall with small nails driven through each corner of the tin and place on the bracket a candlestick containing a lighted candle.

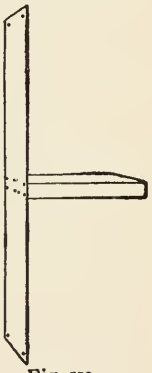


Fig. 519.

One of the most quickly made

Festoons for a Christmas Tree,

and one which has never been thought of until now, is of tin-foil, the common kind of foil to be found at the florist's. It also comes around cakes of chocolate, rolls of cream-cheese, and large packages of tea. You can make the trim-

Home-made Christmas Tree Decorations.

Fig. 523.

ming any length desired by pasting strips of the tin-foil together, but, before joining the pieces, fold one at a time and cut slashes on each side nearly across to the opposite edge as in Fig. 523. Unfolded, the strip resembles Fig. 524; pulled at each end it opens and lengthens out into Fig. 525.

Fig. 525.

This decoration catches the light and glistens beautifully, but it must be handled carefully and not laid down after it is stretched open. As soon as ready hang the strips upon the tree, where they will be safe. The best plan is to make these loopings after the other decorations are finished and on the tree. When the pieces are cut they are more easily handled if but a few are put together at a time before they are pulled open; then the decoration will appear in perfect shape and look like polished shining silver hanging in delicate, graceful festoons.

Fig. 524.

Another effective trimming made of tin-foil is in the form of

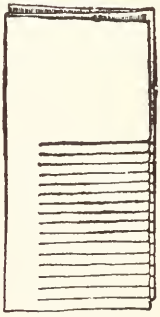


Fig. 526.

Fringe Ruching.

Fig. 526 shows fringe partially cut; use three layers of the foil and cut them into fringe; then take a strong, coarse string and twist the tin-foil fringe around and around it, forming a rope of silvery fringe (Fig. 527).

Fig. 527.

An ornament that delights children, the idea of which comes from Germany, is a jolly little black

Chimney Sweep,

with his funny broom held high in air. He wears a peaked white hat and carries a bag filled with goodies. He is made entirely of prunes (Fig. 528)—one for the head, two for the body, one for each arm, one for each hand, two for each leg and one for each foot. The prunes are strung together with a coarse needle and thread. If he is too limber, give him a backbone by running a slender stick through the back of the head and body. Make him a paper hat shaped like a wide-mouthed horn, and cut out a paper face and paste it on the little man's head; then tie the sheer white bag across his shoulders, fasten it at the side with a pin and fill the bag with sweets; the broom can be fashioned of a wooden toothpick with a bunch of broom-straws bound upon one end. The happy child who receives the chimney sweep from the tree may devour the prunes when tired of the toy.

Fig. 528.

Home-made

Fancy Cakes

cut in odd shapes make fine decorations and will be eaten with delight by the young people. Select a simple recipe, roll the dough out flat and cut into the shapes of men, women, animals, and birds. When baked, ornament the cakes with icing put on in thin, slender lines; in most instances outline the figures in white sugar.

Yellow is a color which stands out well in the midst of the dark green foliage of the fir, and

Oranges

may be used to supply it. A few can be hung to the tree by means of ribbons; others may be made into pretty little baskets and filled with the candied sections of orange. Tie a piece of tape or any kind of band around an orange as a guide for cutting the rind evenly; stick two pins on each side to designate the location and width of the handles; then, with the small blade of a knife carefully cut the handle, keeping it the same width all the way from side to side. Next cut the rind along the edge of the tape (Fig. 529). Remove the skin, in bits if necessary, to avoid tearing the handle or edge of the basket. Work the inside juicy fruit free from the remaining rind and take it out of the basket (Fig. 530). If there is difficulty in doing this, cut the fruit out in pieces. Pass a

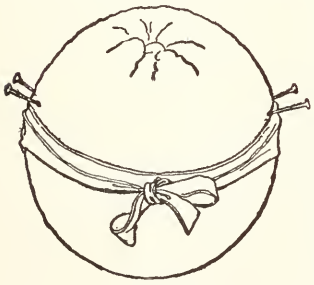


Fig. 529.

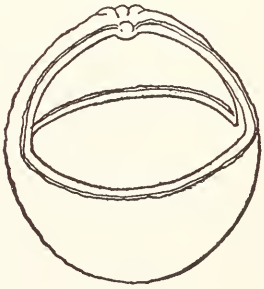


Fig. 530.

narrow ribbon under the basket and up over the handle, tie the ends; then bind them around under and over the middle of the handle, finishing with a bow-knot on top. The ribbon strengthens the handle, without it the weight of the basket when hung on the tree would cause it to break from the handle and fall.

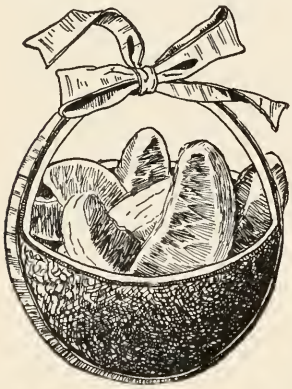


Fig. 531.

Fill the orange basket with sections of the fruit, which have received a brittle coating by being dipped in clear, hot, home-made sugar candy (Fig. 531).

Make a number of pretty,

Fancy Boxes

of pasteboard cut in different shapes and covered with various colored paper. One in imitation of a large stick of peppermint candy may be made of a strip of stiff white paper ten or twelve inches long and three and one-half inches wide; unruled writing-paper will do. Paste the two lengthwise edges together, forming a cylinder. Around this paste a long, narrow strip of bright-red paper, wrapping it spirally around the white tube. Slash two circular pieces of paper around the edges so that the disks may fit into the ends of the roll when the slashed portions are bent forward. Fix one of the round pieces in the bottom of the box with mucilage. When dry fill the box with small bits of candy or kernels of nuts; then glue a loop of narrow ribbon or one of red worsted at the top, fasten in the round cover, and hang the box on the tree.

Be sure to save some of the prettiest paper for

Cornucopias

Cut them according to the dark portion of Fig. 532, and make the white-paper lining extend higher than the outside. Glue the two papers together, inserting a narrow ribbon for a handle between outside and inside papers. Let the colored paper project a quarter of an inch beyond one side of the lining in order that the edge A may fit neatly over the lining B (Fig. 532), avoiding unnecessary bulkiness where the two sides join. Ornament the cornucopias in different ways, according to fancy and the material you happen to have for the purpose. Fig. 533 shows a gold-paper cornucopia decorated with white beading on a scarlet ground and a fancy picture in a red and white embossed frame. You can also make little bright-colored cheese-cloth

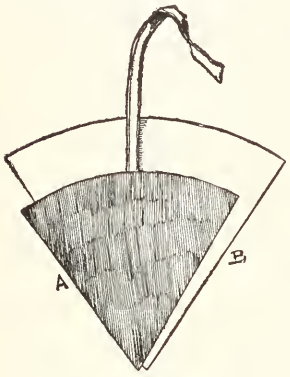


Fig. 532.

Fig. 533.

Christmas Stockings

by cutting them out and sewing the edges together with far apart button-hole stitches of gay worsted. When finished fill them with sugar-plums or small cakes.

Bobbinet Bags

made small and button-holed in the same way, with draw-strings of worsted, look well on the tree when filled with

nuts or pop-corn, and little bird's-nests of egg-shells covered with moss and filled with eggs of sugar are charming.

Holly-leaved Festoons

of gold paper with scarlet-paper berries will make the tree very gay. Cut the gilt paper into a number of squares (Fig. 534), fold each piece through the centre (Fig. 535), and fold again, forming a small square (Fig. 536). Crease this diagonally through the centre and cut according to the dotted lines of Fig. 537, clipping off the point C to make a hole in the centre of the design. Open out the paper, and it will be a conventionalized group of Christmas holly leaves (Fig. 538). Fold smaller squares of red paper in the same manner and cut the design shown by the dotted lines of Fig. 539, unfold and the paper will be a formal pattern of red berries (Fig. 540). Now lay the berries (Fig. 540) out flat on the leaves (Fig. 538), adjust the two together; then lift the berries, put a little glue on the edge of the hole and fasten the berries on the leaves, pasting them together at the centres only. Fasten another layer of leaves on the other side of the berries, also at the centre,

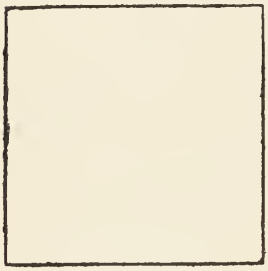


Fig. 534.

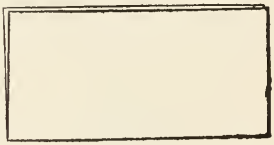


Fig. 535.

Fig. 536.

C Fig. 537.

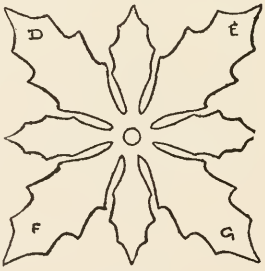


Fig. 538.

putting the berries between the leaves. To the tips of the large leaves on the last group (D, E, F, and G—Fig. 538) fasten the tips of corresponding leaves on another bunch; at the centre of these glue more berries, then leaves, with their four tips pasted to four other leaf tips, and so on, following, in order, leaves, berries, leaves with points pasted to points of other leaves, then berries again (Fig. 541), making the rope of golden holly as long as needed. Tie a strong string to a small circle of gilded card-board and run it through the holes in the festoon. You can close the holly and berry garland up flat against the card-board ring by shoving the leaves and berries together down the string, as an accordion shuts flat when one side is pushed toward the other. In this way the trimming may be kept in good order and packed safely to serve again next year.

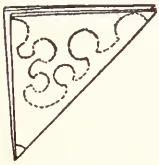


Fig. 539.

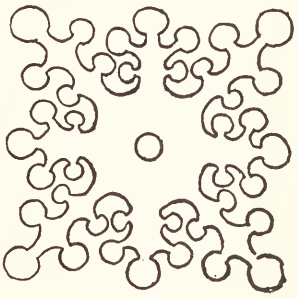


Fig. 540.

Fig. 541.

Pop-corn Balls

look tempting on a Christmas tree. They are easy to make, and taste very good indeed. Have the fire clear and hot, with no flames, and put in the popper at one time only enough corn to cover the bottom a single kernel

deep; shake the popper constantly while the corn is over the fire until it has all popped. Then boil one-quarter of a cupful of molasses with a little sugar until it hardens in water, remove from the fire before it turns brittle and pour it over two quarts of corn. Mix well with your hands, make into balls about the size of lemons, suspend the sweet, white ornaments from the twigs, and use the remaining corn for a different decoration. String a lot of the flower-like kernels with a large needle and strong thread, loop the strands from branch to branch, and the snowy ropes will lighten up the foliage beautifully (Fig. 542).

Fig. 542.

Strings of Red Cranberries

with knots of narrow red satin ribbon tied here and there on the strands, make a fine decoration.

Peanuts

wrapped in yellow, red, white, light blue, and pale-green fringed tissue-paper (Fig. 543) and tied on pen-

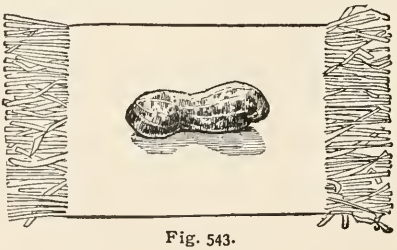


Fig. 543.

dent lengths of string, three or four to each (Fig. 544), and attached at varying lengths to the limbs of the tree are a splendid decoration, for these peanut kisses give quite a gala appearance to the tree.

Fig. 544.

Do not forget to have some form of

Jewelry for the Tree

bracelets or necklaces—not of gleaming precious stones nor yet of gold or silver, but of toothsome nut kernels and delicious, dark rich raisins. With needle and strong thread string first a peanut, then a raisin, a peanut, a raisin, an almond, a raisin, a filbert, a raisin, and so on, using as many kinds of nuts as you deem best (Fig. 545). The girl or boy receiving this necklace will be charmed and later may devour the queer beads one by one as they are pulled from the string.

Fig. 545.

A simple decoration is made of

Colored Paper Chains

the first link being formed of a narrow strip of paper pasted together into a ring; the next link is a piece of paper passed through the first ring before the two ends are joined. Each

succeeding link of the chain is made in a similar manner. Rosy apples are acceptable as ornaments and are always to be found on the tree in Germany, the land that first introduced the Christmas tree to other countries.

There is one style of ornamental gift which in Germany must hang on the tree until New Year's Day—the

Gilded English Walnut

(Fig. 546). The preparation of these can be made a delightful frolic if there are several young persons in the secret. Crack open the nuts so there will be two perfect half shells to each (Fig. 547). Inside the empty nut place a motto or device which will tell the fortune, or part of it, of the recipient of the gift. Ideas will come to you as the work goes on. For a hint to help a little at the start, cut two hearts of red paper and fasten them together with a dart made of a pin and piece of white paper (Fig. 548). This denotes that the girl or boy who gets it will be the first to marry. Fig. 549, the water-color brush, means that the happy lad or lassie to whose lot it falls will be an artist. Fig. 550 signifies ability to appreciate music. Fig. 551 ensures plenty of wordly goods. One suggestion gives rise to another, and you will think of more than enough for all the empty

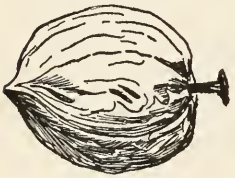


Fig. 546.

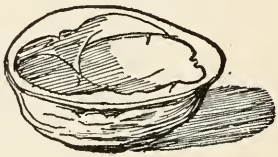


Fig. 547.

Fig. 548.

Fig. 549.

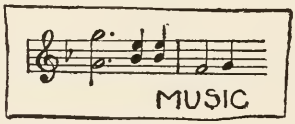


Fig. 550.

nutshells. After the "fortune" is placed within the nut, glue the halves firmly together. When dry, work a tack in the end where the stem grew, twisting it slowly that the shell may not split or break. When the tack seems firmly in place, gild the entire nut, including the tack; tie a strong string on this and hang the "fortune" on the tree. As all the nuts look exactly alike, no one can tell which is which—not even those who made them will know who receives the different "fortunes" until the nuts are opened and the secrets revealed.

Fig. 551.

Most of the ideas given are for a daytime Christmas tree where lights are not used. If candles are employed, no paper festoons can be placed on the tree. Lights are always dangerous, and the tree may be quite brilliant without them.

Toys and useful little articles, such as you can make as presents for all the members of the family, big and little, and for friends, will surely add to the interest and appearance of the tree.

CHAPTER XXII

CHRISTMAS DEVICES

HRISTMAS GIFT! Christmas gift! Ah, I've caught you! Hand over my present!" With a gay laugh the children exchange this salutation, without a thought of the request ever being granted, but simply for the fun of being the first to call out the Christmas greeting. Sometimes the forfeit is paid, usually with a handful of nuts or candy, a pretty trifle or anything the captive happens to have convenient at the moment. The giver enjoys the fun fully as much as the recipient, and with a hop, skip, and jump departs in hopes of likewise finding a fellow-playmate or some member of the family off guard, that she may, in turn, be the first to wish a "Merry Christmas" and claim a gift.

An All-day Christmas Pie

is a charming device for delivering gifts intended for one person, and the fun and expectancy last the entire day.

Cover the outside of a new tin pan with plaited white tissue-paper, and paste the paper along the top and over the bottom edges. Decide on the number of gifts you intend the pie to contain, and cut a corresponding number of slits in the circular piece of white tissue-paper which is to form

the top crust (Fig. 552). Wrap each present in a bright-colored piece of tissue-paper, and tie with a narrow ribbon of like hue (Fig. 553); be sure to fasten the knot on top of the package securely, so there will be no possibility of its slipping from the parcel when it is jerked out of its bed of bran. Fill the pan with bran or sawdust, arrange the gifts on top in the order you wish, then put more bran over the parcels, heaping it in the centre; thread each ribbon through its respective slit in the cover and bring the cover cautiously down over the pudding without tearing. Gather the edge a little at a time with your fingers, and paste it down over the sides (Fig. 554).

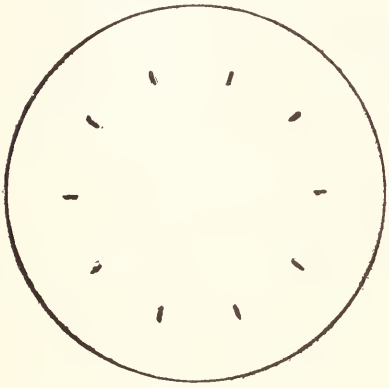


Fig. 552.

Fig. 553.

Paste a double-edged fringe of white tissue-paper around the top edge of the pie. To do this, fold several slips of paper, as in Fig. 555; fold again through the centre and cut in a fringe (Fig. 556). Open the fringe, gather it in the centre with thread and needle, and at short dis-

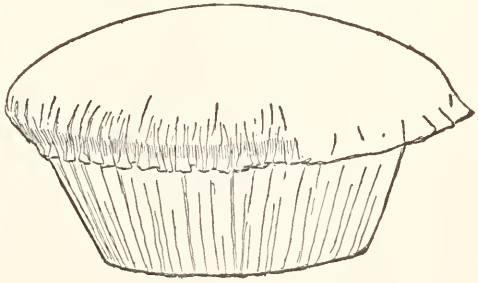


Fig. 554.

tances sew on tiny bells; then fasten the fringe in place (Fig. 557). Puncture a hole with a large needle in the centre of the top of the pie, and insert a twig of holly.

Fig. 555.

Fig. 556.

Cut as many small squares of writing-paper as you have ribbons, label each with the hour when the present is to be drawn, slip them on the ribbons near the ends, and below each tie a little silver bell, as shown in illustration (Fig. 557).

If there are to be only three packages, let one be drawn in

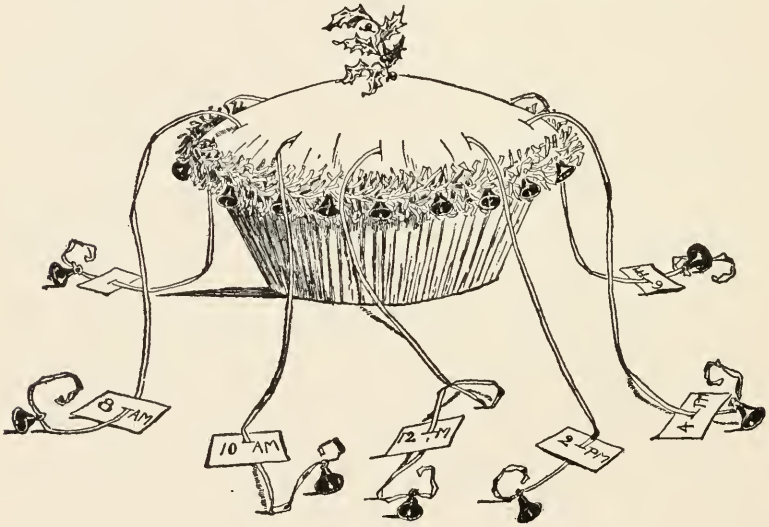
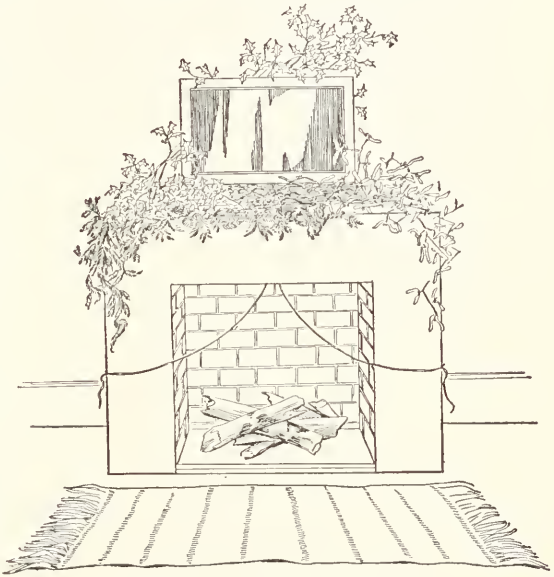


Fig. 557.

the morning, another at noon, and the last in the evening. If more, distribute the gifts as evenly as possible through the day.

The Magic Fireplace

is another means of delivering the Christmas gifts, and the delight of the children when they see their presents come tumbling down the chimney in a way they have only dreamed of, will repay the thought expended in preparing the surprise.



The Magic Christmas Fireplace.

Two wooden packing boxes, one about four feet square and a foot and a half deep, the other somewhat smaller but of nearly the same depth, form the framework of the fireplace. Stand the large box on its side — the longest side if the box is not exactly square—and the smaller box within it as shown by Fig. 558. Remove the top pieces of both boxes (A B, Fig. 558), and over the top of the small box tack a piece of doubled light-weight wrapping paper. At each end of this false cover fasten securely a piece of strong twine, then puncture two small holes near the centre of the paper and pass the ends of the twine through them, drawing it down as shown by letters C D, Fig. 559. Saw the board, which was taken from the top of the small box, into two pieces, and place them in a slanting

position reaching from the top edge of the small box to the upper corners of the large one (letters E F, Fig. 560). The boards are kept from slipping by small nails driven half way into the edge of the small box. Cover the spaces at the sides and top, between the two boxes, with heavy brown wrapping paper, tacking it smoothly down along the edges. This paper should be marked to represent bricks.

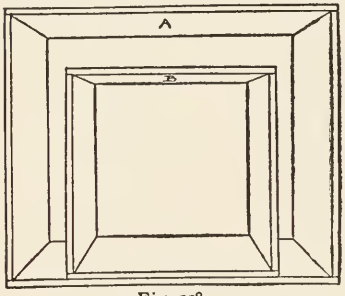


Fig. 558.

Pile a few sticks of charred wood on the inside hearth and, to make it appear that they are still smouldering, tack red tinsel paper upon them here and there.

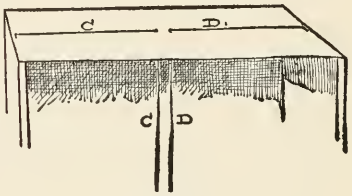


Fig. 559.

Into the receptacle at the top of the mantel (letter G, Fig. 560) place all the presents, resting them upon the paper top of the small box. Things that are easily broken should be covered with soft wrappings, for in the grand climax, when the toys roll pell-mell down into the fireplace, the fragile articles might come to grief.

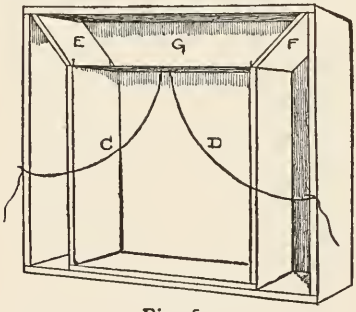


Fig. 560.

When the last package has been stowed away, replace the top of the large box. Decorate the completed fireplace with evergreen, and bring the two strings, C and D, which

hang down upon the hearth, outside, looping them back over tacks at either side of the fireplace, as shown in Fig. 560.

At the appointed time the group of eager children will stand and gaze with awe at the wonderful and mysterious fireplace, which, like a fairy house, has shot up in a night.

Two persons, one on either side, must grasp the strings tightly, and simultaneously give a pull. With a ripping, tearing sound the paper gives way and whiz! bump! bang! the toys come tumbling down, rolling and bounding out on the floor.

Because it is Christmas we find ourselves longing to render little services, to make others happy and cause their eyes to brighten and sparkle with pleasure, for this is the season of giving as well as receiving, and the privilege belongs to all.

If there is a little convalescent in your family or among your acquaintances, one who will not be allowed to share the Christmas dinner, prepare for her a

Christmas Tray

You can make it very attractive.

Have a Christmas tree for a centre-piece (Fig. 561), a very modest yet charming little affair—only a wee tree fashioned from a branch of boxwood, beautified with home-made toys and decorations cut from gilt and bright-colored papers. Use a large-sized button-mould for the tree stand; push the end of the stem into the hole in the centre of the mould, and the tree will stand alone. Should you have no boxwood, take any green twig and turn it into a miniature Christmas tree by trimming off the

ends of the branches until the little tree somewhat resembles a cone in shape. It will require only a few moments to make the tree, and the sick child will exclaim with pleasure at the sight of it.

Fig. 561.

A house with

Santa Claus

climbing down the chimney (Fig. 562) is, in reality, a piece of prosaic bread and butter transformed. After spreading the bread with butter, cut out the door with a sharp, small-bladed knife; then the two windows, and the chimney. Procure a jolly little paper Santa Claus and fasten him in place by making an incision in the top of the chimney and inserting one leg of the figure; serve this on as pretty a plate as you can find, preferably a decorated one.

A Christmas pie is another form of bread and butter. Cut the shape out with a large-sized tin biscuit-cutter, and after buttering the bread mark it into wedge-shaped pieces. Cut a slice or two (Fig. 563), leaving the rest to be cut by

the child. If permissible, a little white sugar sprinkled over the top of the pie will enhance its appearance. Layer jelly cake is made of two round pieces of bread and butter, spread lightly, with a layer of chicken jelly placed between and over the top of the cake. Odd designs are always attractive to children and may be introduced in

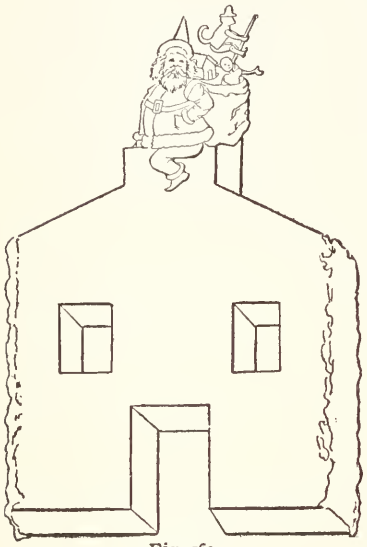


Fig. 562.

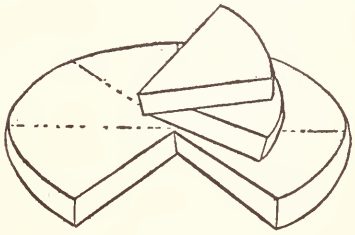


Fig. 563.

Serving Toast

Make the toast very carefully, allowing the bread to turn only a light brown on both sides, and keep it hot between two hot plates. Toast should be eaten immediately after it comes from the fire; it loses its delicacy by being scorched or served warm or stale instead of fresh and hot. After the rest of the meal is ready on the tray and the two plates are heated, set sev-

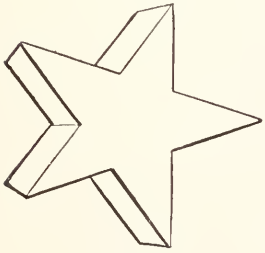


Fig. 564.

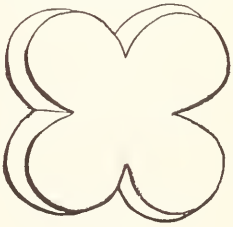


Fig. 565.

eral tin cake-cutters in the oven to heat; then make the toast with a fork, not a toaster, one piece at a time, and as each is done, cut it while hot into queer forms with the warm cake-cutters. Arrange the pieces on one of the hot plates and cover them with the other. The child will be entertained by the fanciful shapes (Figs. 564, 565, 566), and eat them with a relish.

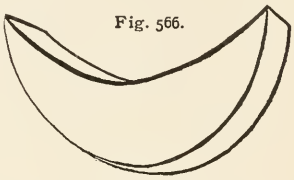


Fig. 566.

In place of the family roast, a lamb chop will probably have to do duty as the

Pièce De Résistance

Select the best cut and broil the chop skilfully over a clear fire. Let it be well done but not burned; sprinkle with a little salt and pepper. Have ready some fringed tissue-paper and wind it around the end of the chop; decorate with a pretty sprig of Christmas green tied with a narrow ribbon (Fig. 567). Eggs of blanc-mange (Fig. 568) are made by using empty egg-shells as moulds. The shells must be wet on the inside when the blanc-mange is poured into them to harden. If it is best for the patient to have only a little blanc-mange, mould in small shells and serve one or two.

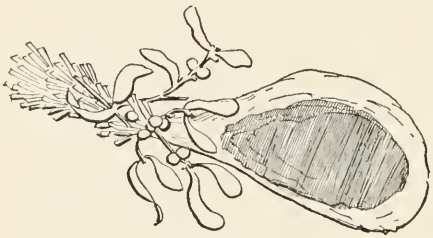


Fig. 567.

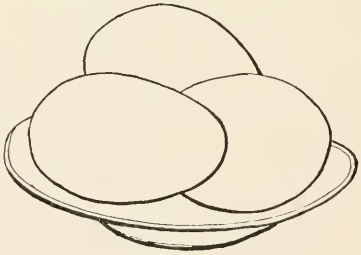


Fig. 568.

Jelly

is acceptable and can be given in most cases of illness. Instead of using a regular mould pour the liquid jelly into a wineglass, and if the white of an egg has previously been beaten up with the jelly, it will rise in a white foam at the top of the glass; after the jelly has hardened the resemblance will be so close it will be difficult to believe the glass does not contain wine (Fig. 569). The child will enjoy this little make-believe. If fresh

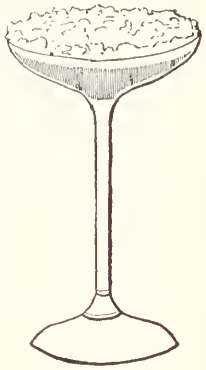


Fig. 569.

Apples

are allowed, cut them as Southern people cut their watermelons (Fig. 570). Slide the knife-blade in the side of the apple, and cut downward, making a slanting outward incision about an inch and a half long; draw out the knife, insert it again at the top of the first cut and make another slit in the opposite direction, the two slits forming the letter A without its cross piece. Again take out the knife and, commencing at the bottom of

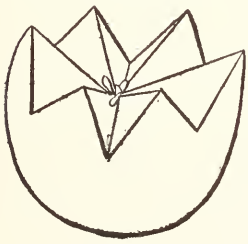


Fig. 570.

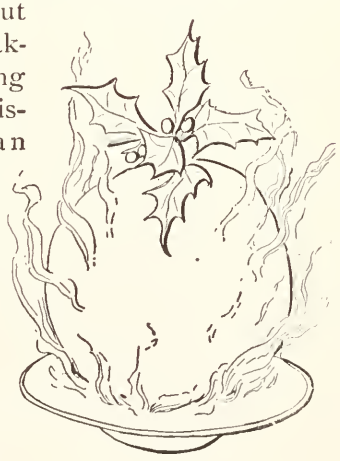


Fig. 571.

the second cut, bring the knife upward and outward, as in the right side of the letter V ; continue cutting these points until the last one meets the first, being careful to push the knife to the centre of the fruit at each cut. When finished pull the two halves of the apple apart.

Plum pudding the child cannot have, but a fine baked apple will answer the purpose and may be made almost as attractive. Select a baking apple free from all flaws, wash it well and "bake to a turn" ; serve steaming hot, with a sprig of holly in the top (Fig. 571).

CHAPTER XXIII

PICTURE WRITING AND SIGN LANGUAGE

THE next best thing to seeing one's friends is hearing from them, and the more interesting the letter the greater the enjoyment, particularly when the communication is intended to be passed around the entire home circle. There is a delightful way in which to express yourself differently from ordinary writing, a method used by the early Egyptians, called picture writing. The Egyptian pictures were not at all like those made by modern artists; their representations were crude and unfinished, yet they answered very well for the people and the times. You have advantages over those ancient people inasmuch as you need not even attempt to draw the designs. All that is necessary for you to do is merely to look over the newspaper and magazine advertisements, select the prints needed, and after cutting out and pasting them on a sheet of paper, with a few connecting words between, you will have produced an odd, interesting letter, and the work will be pure fun.

Fig. 572 gives an idea of such a letter, supposed to have been written on Thanksgiving. Try to read it. For

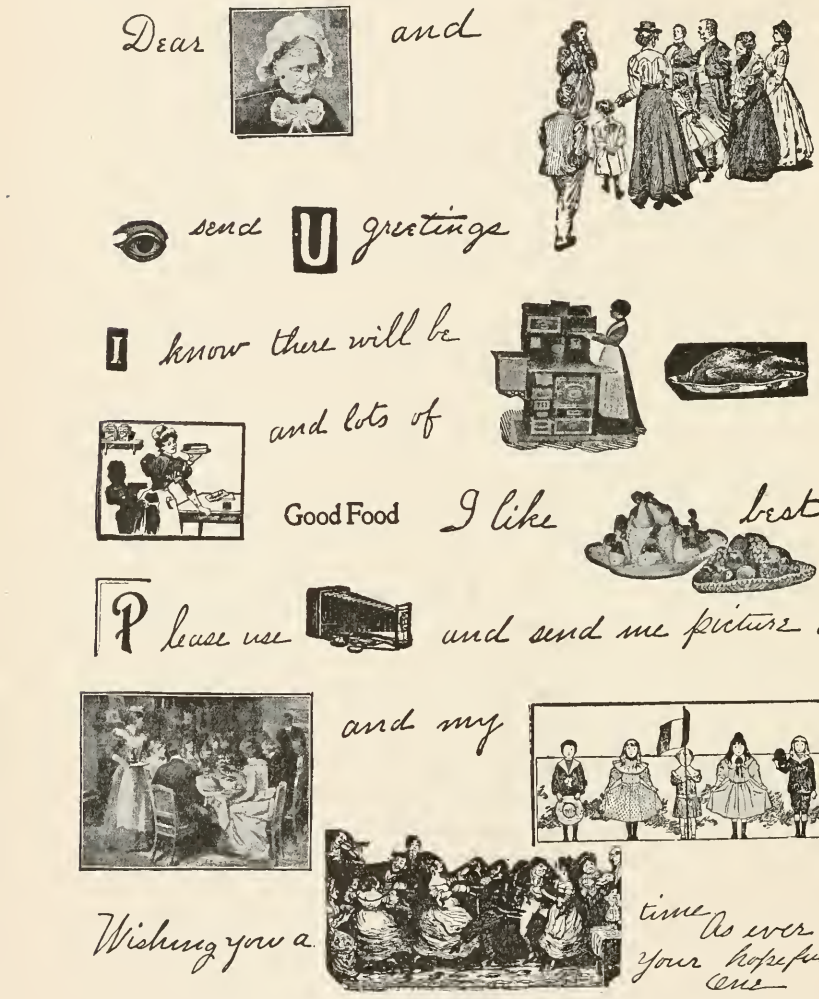


Fig. 572.

fear you might not quite catch the meaning, here it is interpreted for you:

"Dear Grandmother, Aunts, Uncles, and Cousins: I send you greetings. I know there will be a cooking of tarts, turkey, puddings, and lots of good things. I like sweetmeats and fruit best. Please use the camera and send me a picture of the family while at dinner, and of my cousins standing in a row. Wishing you a jolly time,

"As ever, your

"HOPEFUL ONE."

This is intended only as a suggestion; if you can write your letter entirely with pictures, without the aid of words, it will be much better.

There is another method you might employ; take the well-known

Symbols

and compose your missive of these. Such as the dove, meaning peace, gentleness; anchor, hope; ark, refuge; key, explanation; chain, bondage; star, promise; lamb, innocence; scales, justice; horn of plenty, prosperity; heart, love; shepherd's crook, protection, and hour-glass, time. The list is much longer, but enough has been given to explain the scheme; other designs may be added as needed, but use only those whose significance is well established and commonly understood.

Flower Writing

makes a charming letter, the blossoms being placed in rows according to their meaning as given in the language of flowers. Compose a sentence of white clover, oats, and balm, and it will read:

"I promise (white clover) music (oats) and social intercourse (balm).

This might form part of an invitation to your house-party.

For a regular

Indian Powwow

letter you must do as the red man does and write in Indian signs, which are usually rudely drawn figures meaning

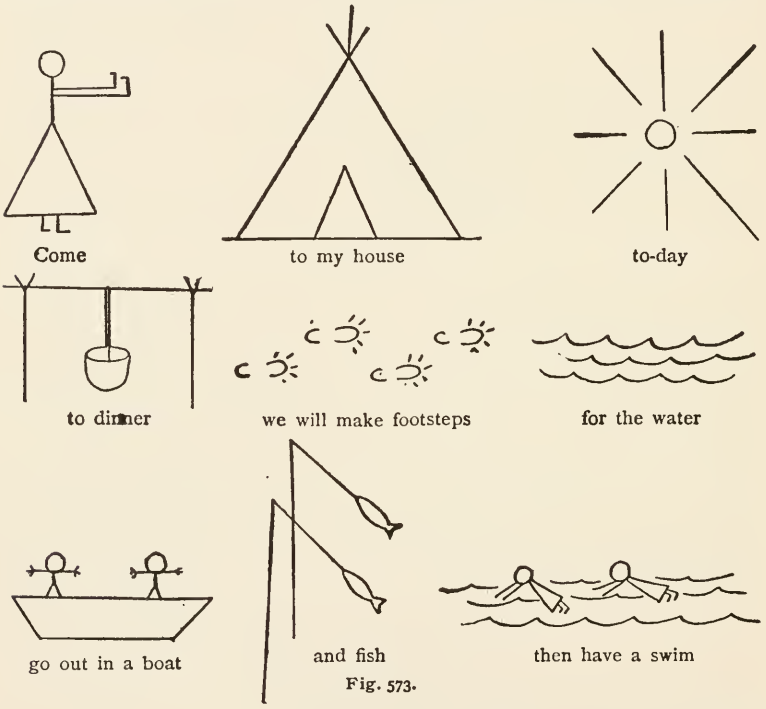


Fig. 573.

much to our copper-colored brother, but often requiring ingenuity on the part of the white man to translate. Some of the best examples are to be seen on sandstone in Dakota County,

Neb., where there are hundreds of sketches. One of the most distinguished of Indian artists or historians is said

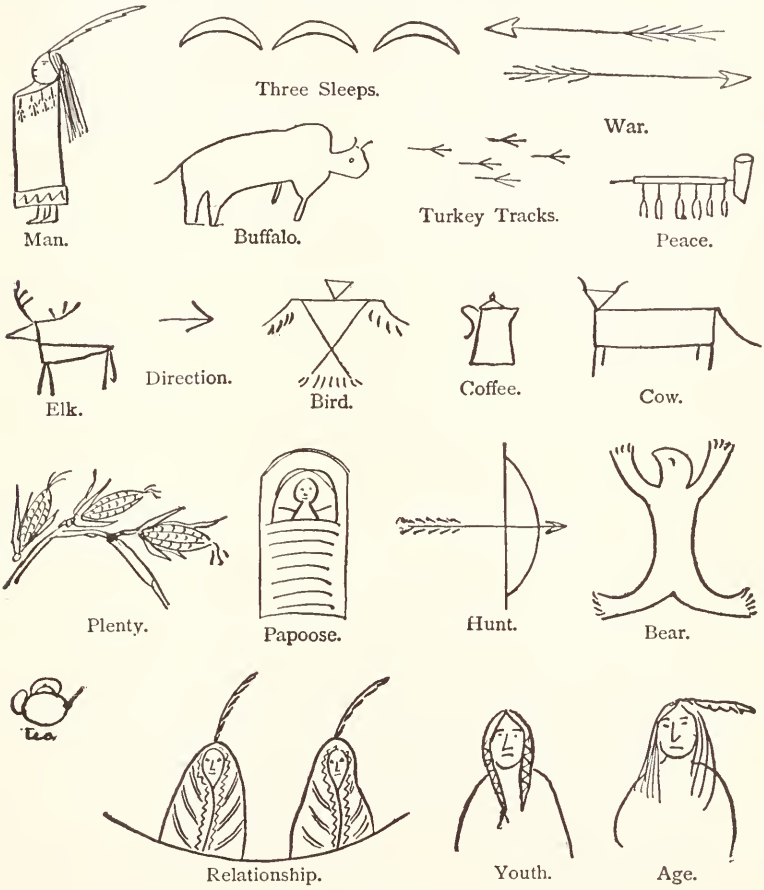


Fig. 574.

to have been Lone Dog, of Yankton, Dak., who made most of his pictures on skins. Neither stones nor skins

will answer your purpose; ordinary paper is more convenient and will be as fully appreciated if you use thought and care in drawing and composing your message. Make simple, rude pictures of different objects, borrowing the Indian's idea but adapting it to your needs. Fig. 573 gives an example of a girl's powwow letter. You may invent as many designs as you choose, that will be part of the fun of Indian writing. Fig. 574 shows some of the signs needed.

A Letter of Colors

is something entirely new; it should be composed of thoughts embodied in colors, without alphabet, words, or pictures—nothing but brush strokes of delicate pinks, tender greens, soft grays, deep orange, rich purples, and all the many and varied tones, tints, shades, and hues known to man. The following example, being fully interpreted, will initiate you in color meanings and composition:

Light Scarlet.
My Dear Friend:

Light tone of yellow. Drab. Blue. Red brown.
I am glad you have thought out the truth. My interest in

Scarlet red. Myrtle green. Orange. Different tones of yellow.
and friendship for Nature is gaining strength. I travel miles

Variety of color flecks in rows.
for the flowers.

Yellow pink.
Your enthusiastic

Scarlet.
Friend.

The name signed at the close of the letter need be the only writing. A list is given of the meaning of some of the colors, but you will probably need more; work out the extra combinations for yourself. The system being once understood it will not be a difficult task.

Rich red—Love or loved one.
Red brown—Interest in or for.
Orange—Strength, force.
Indigo—Wisdom.
Blue—Truth.
Green—Life, freshness, youth.
Yellow pink—Enthusiasm.
Blue pink—Politeness.
Gray—Doubts, fears.
White—Intelligence, light, innocence.
Black—Ignorance, darkness, night.
Bright yellow—Joy, gladness, sunlight, day.
Drab—Thought.
Scarlet—Friendship.
Myrtle green—Nature.
Different tones of yellow grouped together—Travel, motion.
Brown in solid squares—Rocks.
Blue and green in horizontal lines—Water.
Brown and green in horizontal lines—Summer.
Brown and black in horizontal lines—Winter.
Color dashes in wedge shape, variety denoted by colors used—Birds.
Pink—Acquaintance.
Mingled flecks in a row of any color or colors with green denotes one or more variety of flowers.
Green in long perpendicular dashes—Trees.
Tints may include the personal pronouns I, my, me, or mine.
Shades may include the pronoun you or your.

PART II

WHAT A GIRL CAN DO

GALATEA

CHAPTER XXIV

STATUARY TABLEAUX

IN the first place the statues must be white—not nearly white, but very white—flesh, hair, and costume; then the background must be black, a dead, lustreless black. Given these two requisites any figure, or group of figures, will look like statuary; and when care and pains are taken in the posing and draping and the proper light is thrown on them, the living, breathing, warm flesh and blood so closely resembles the cold, lifeless marble, it is difficult to realize one is not looking at statues carved by the hand of man.

The Stage

Arrange the background on the stage in the form of a three-fold screen, with sides slanting outward to the front. When possible, the top of this space should also be covered with the black material, slanting up to the front; in this way the statues are entirely boxed in, the only opening being the front of the stage. That is, the only apparent opening, for between the back and side panels a space about one foot wide must be left for side-lights, and on this account the back should extend at least one foot beyond each side-panel.

The Lights

A strong calcium light directly in front of the stage, though some distance from it, is best for amateur tableaux, and the side-lights at the back need be used only when it is imperative that no shadows shall be cast on the background, as in the case of the armless statues. With the cross-lights thrown behind the statue, the black-covered arms melt into the black background with no shadows to betray their presence. Tall piano lamps are best for this purpose.

Again, the front light may be placed nearer one side of the audience-room, and a pleasing effect of light and shade on the statuary itself be produced.

Pedestals

Place a platform about one foot high, and of a size to hold the largest group, in the centre of the stage, and leave it there as a base for all other pedestals. Packing boxes of various sizes, chosen to suit the statues, make excellent pedestals, and these, as well as the platform, must be smoothly covered with white cotton cloth.

Costumes.

Pure white Canton flannel is the best material to use, as it drapes most beautifully and takes the true sculptor's folds. It should not, however, be too heavy in weight, else it will be stiff and unmanageable.

The Greek or classical costume is almost the only kind you will need, and it is made simply of two breadths of the

canton flannel sewed together and fastened at the shoulders; the slits for the arms being left open nearly to the waist. Under this is worn a sleeveless waist of the same material. A cord tied around and just under the bust, and the dress pulled up to bag over gives one style of costume; tied around the waist and bagging down far below it, gives another, and both under the bust and around the waist, still another. The dress should be long enough to allow of all this pulling up, and if too long when the statue is mounted on her pedestal, it can be turned up underneath; no hem is necessary on these garments. An extra piece of drapery is almost always a part of the costume, and is used for wrapping around the figure to give the narrow effect at the feet; this should be about two yards long and of two breadths of the material sewed together.

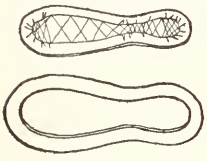


Fig. 575.

Make the sandals of white insoles or two pieces of heavy card-board, cut to fit the bottom of the foot, extending half an inch beyond all around.

Fig. 576.

Cover the cardboard with white material (Fig. 575), and sew together as in Fig. 576. Fig. 577 shows a simple and modified form of sandal. Cut the side and back pieces from the white material like Fig. 578, and sew them to the soles as in the Fig. 577. Also sew white tape to the points of toe and heel pieces, as shown in the diagram, leaving free the two ends at the ankle for tying.

Fig. 577.

Fig. 578.

Mop-rope, the loosely twisted rope used for floor-mops, is the material from which to fashion imitation

Marble Locks.

Make a tightly fitting white cap to entirely cover the hair, as a foundation for the wig.

In order to have the parting of the hair directly in the middle of the head, put the cap on and, with a lead-pencil, mark the desired line. The rope must be then untwined and the middle of each strand laid across the top and stitched down along the pencil line, half the length falling on one side, half on the other. After this the wig can be donned, the hair arranged and pinned in place according to taste or the fashion selected, and then stitched securely to the cap.

When the hair is done up high and a side or back view is shown, it is necessary to sew the ends of the rope along the bottom edge of the cap at the sides and back, as the locks are drawn up from there. A narrow border of raw cotton sewed entirely around the edge of the cap so that it will extend a trifle over the forehead and neck, does away with the dark edge of hair which it is, otherwise, almost impossible to hide. When only a front view is desired, the back of the cap need not be covered with the rope. Men's and children's wigs are made on the same principle, be their hair long or short.

The face, arms, neck, and hands must be as white as it is possible to make them. Face powder applied in the ordinary way will not give the required whiteness, and it is easily rubbed off.

Here is a professional actor's recipe which is perfectly harmless and will make the

Flesh Like Marble:

Take one ounce of white-zinc powder and three ounces of glycerine and rose-water—two-thirds glycerine, one-third rose-water. Shake the glycerine and rose-water together,

mixing them well, then add the ounce of white-zinc powder and shake again until thoroughly mixed. Apply with a sponge and let it dry, then smooth it with your hand and powder with any pure face powder.

To Remove

First wash with warm water, then rub with cold-cream. Wipe the cream off with a soft linen cloth, after which powder the skin to prevent chapping. Always allow plenty of time for making the flesh absolutely white, as this can not be done in a hurry.

Subjects for Tableaux

It is a wise plan to choose a subject already presented by some sculptor and copy his work as closely as possible, for the artist has given much thought and study to the posing of his figures and the lines of his drapery, and one can be sure the artistic effect will be good; or a subject may be found in some painting which will be suitable for statuary, and this also will have the advantage of having been designed by an artist. Most of the tableaux should be selected in this way, but a few variations, where a surprise for the audience is prepared, or seemingly impossible effects are produced, gives piquancy and charm to the entertainment.

The Armless Bust

The effect of armless or mutilated statues which, to the audience, appear almost miraculous, may be produced by simply covering the parts of the body, supposed to be missing, with dull black cloth. Everyone knows that by covering one of the front teeth with a piece of black sticking-plaster the perfect effect of a lost tooth is given, and it is on the same principle that limbs are cut off or figures decapitated in statuary tableaux.

The illustration of the armless bust shows how the arms are made to disappear bydrawing over them a pair of black stockings, or long, narrow bags. In this tableau the side-lights must be used to prevent any shadow from being cast upon the background; the lights must shine behind the statue, not on it.

Fig. 579.

IN THIS MANNER MAKE THE ARMLESS BUST.

The pedestal is made of a packing box, with the top cut out to admit the figure, as shown in the diagram (Fig. 579). A fine color effect is produced when this pedestal is covered with dark red material, upon which rests, to all appearances, the pure white marble bust. In covering the top of the pedestal cut the cloth to extend around over the opening at the back, and it can be fastened down after the bust is in place. For this statue the front light must not be too strong and its full force should be concentrated on the head and bust, leaving the arms in shadow.

Fig. 580.

Another quite wonderful effect is that of the

Portrait Medallion

To produce this set a frame up near the front of the stage, over which is tightly stretched the black material of the background. In the centre sew a piece of white cloth cut in an elliptical shape, about two and a half feet long by two feet wide (Fig. 580). Make a laurel wreath of white paper

leaves fastened on wire stems and tie at the bottom a bow of white ribbon. Sew or pin the wreath upon the black background, near enough to allow its inner leaves to lap over the white. Cut in the medallion, and through the background, a hole the shape of, but smaller than, the head and bust. This should be experimented with on other material before the medallion is cut, so that no mistake be made.

The medallion must be placed at a height easily reached by the standing figure of the person posing for the portrait. The head is thrust through the hole, then turned to present a profile view, while the shoulder is held back that it may not protrude too far through the opening. The illustration shows the effect of this tableau.

An Egyptian Statue

is an innovation in statuary tableaux which will receive a warm welcome, but, like the others, it must be well carried out to be a success. The figure and everything pertaining to it must be of one color, not white this time, but gray, all gray, to represent stone.

Study the pictures of old Egyptian statues; notice the costumes, and copy one carefully in gray canton flannel. Gray stockings must be worn and gray sandals, or the sandals

may be omitted. Paint the face, arms, and neck with gray pastel, rubbing it on lavishly; this has been used without any harmful effect and is easily washed off with warm water and pure soap. Cover the hair with the typical Egyptian headdress (Fig. 581), made of a square of the gray material. Make a seat for the statue of a box which should be only wide enough to be comfortable and of a height to allow of a footstool under the feet. Nail a board the width of the box to the back to form a back for the seat and let it be high enough to extend a few inches above the statue's head when she is seated. Cover the chair and footstool with the gray canton flannel.

Fig. 581.
Side View.

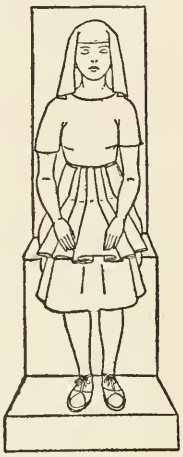


Fig. 581.
Front View.

The Egyptian statue must be stiff and formal, seated on her chair as in Fig. 581, with hands on knees and feet together. The entire absence of graceful curves of body or drapery makes a charming contrast to the other statues. In statuary tableaux the eyes must be kept closed, except in the tableau of Galatea, and the eyelids should be as white as the rest of the face. The eyelids of the Egyptian statue must, of course, be gray.

Pygmalion and Galatea

This tableau includes the sculptor as well as the statue, and requires a little acting on the part of the statue—herein lies the surprise.

The tableau illustrates the old story of the Greek sculptor Pygmalion, who fell in love with the statue he had made, and prayed to the gods to endow it with life. His prayer is granted and the statue, Galatea, gradually awakens.

When the curtain is drawn aside, Pygmalion, dressed in Greek costume of brilliant colors (to contrast with the white statue), is seen kneeling with arms extended at the feet of Galatea, who stands in the pose shown in "first position" of the illustration.

Pygmalion maintains his position without moving while Galatea awakens.

First Position.

Second Position.

Standing, as in "first position," with bent head, closed eyes and clasped hands, the right foot a little in advance of the other, the weight of the body resting principally upon the left, Galatea slowly, very slowly, unclasps her hands and gradually separates them. The left hand moves out from her side while the right hand, at the same time, is lifted outward and upward to her throat, "second position."

Keeping the left arm extended a little from her side, the hand slightly raised and fingers bent, she continues to raise her right hand until it covers her eyes, at the same time swinging her body around, bearing the weight heavily on the left foot, until the "third position" is assumed. Holding this pose for an instant, she turns slowly back again, lifting her hand until it shades her eyes; she then raises her chin and bends slightly forward as she opens her eyes and beholds Pygmalion. This is the "fourth position."

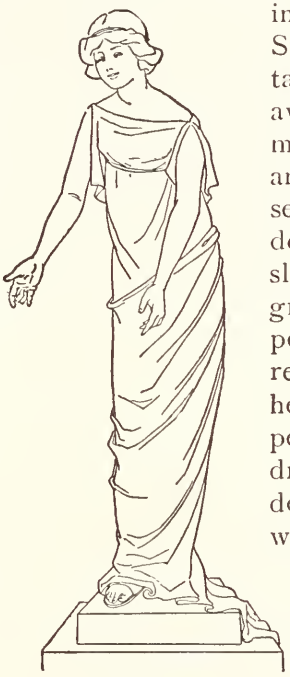
Third Position.

Again she pauses for an instant, then by slow degrees the left arm is raised while the right one is lowered and the hands are held out in welcome, as in the "fifth and last position."

Fourth Position.

At no time must the arms form parallel lines; even at the last the extended arms should be bent very slightly outward at the elbows. The two sharp angles, formed by bending the elbows in the same direction at the same moment, should be especially avoided. At all times during the awakening Galatea must be so posed that her move-

ments might, at any moment, be stopped and she would be found standing in a graceful and charming position. Success in this can only be obtained, and little awkwardnesses avoided, by practice before a large mirror, where every movement and every curve of the body may be seen.



Fifth Position.

No quick or sudden motion must mar the beautifully slow awakening; all should be as gradual as the unfolding of the petals of a rose until the climax is reached, where Galatea extends her arms to the waiting and expectant Pygmalion and the curtain is dropped.

There is no doubt of the success of the tableau when this little bit of silent acting is well done, and it makes an excellent winding-up piece to an evening's entertainment.

CHAPTER XXV

WITCHERY

ASSURED of their welcome, laughter, jollity, and mystery all attend the Halloween frolics which are given up to sports with kale, apples, nuts, mirror, etc. These ordinarily commonplace articles are claimed, on this eventful eve, to be touched with magic, endowed with the power of prophecy and enabled to tell of wonderful adventure or fortune which will befall any one who puts their virtues to the test. And it is Halloween, of all the nights in the year, that is best loved by the sprightly little fairies, gnomes, and elves, who delight in sallying forth from their homes under stones and in old hollow trees to play pranks on us poor mortals. The witches also are out, flying through the air to their annual dance, on their queer steeds, either cats or broomsticks.

James Hogg's poem, "The Witch of Fife," gives a comical description of the witch who flew out of the lum (chimney) and left her husband, who soon followed with his coat "waflling in the wynde." The witches' rides would not be apt to injure old broomsticks, but should you happen to see any cats the morning after Halloween, notice how tired the poor creatures look after carrying the witches all night! That is why the Scotch lads and lassies pity the pussies.

Of course, there are really no fairies, genii, or witches; they are all only "make-believe." Nor are we to put any faith in

Halloween Fortunes,

for these are merely tried to furnish sport for the time and to make us merry; a hearty laugh of itself is good fortune. Often it is the best kind of medicine.

Whether you will be

Rich or Poor

can be ascertained with three saucers. Fill one with salt, which, being white, stands for silver; another with corn-

Fig. 582.

meal, signifying gold, its color being yellow; while the third remains empty (Fig. 582). If you dip your left hand into the cornmeal, you will be very wealthy; if into the salt, you will be comfortable, but lack the luxuries of life; if into the empty saucer, you will be obliged to work hard for a living.

Feather Tests

To foretell the complexion of your future mate, select three of the softest and fluffiest feathers you can obtain. If none is handy, take a pillow and rip open the end seam about an inch or so, making the hole scarcely large enough to admit of your pulling out a few feathers with the thumb and forefinger. The little opening can be sewed up again in a moment's time. On the bottom end of each downy messenger fasten a small piece of paper; a drop of paste or mucilage will be sufficient to gum all three in place. Write

the word "Blond" on one paper; on another, "Brunette," and on the last, "Medium." Label the papers before gluing them on the feathers (Fig. 583). With your right hand daintily hold up one feather, by its top, in front of you, and

Fig. 583.

gently send it flying with a puff of breath. Do the same with the next, and also with the last one; the feather landing nearest to you denotes the complexion of your true love. To make the test sure, try the charm three times, but be careful not to use too much force when blowing the feathers.

For the

Touchstone Charm

seven small, clean stones are required—six of the common grayish color, the seventh white.

Fig. 584.

All should be as nearly as possible the same in shape and size (Fig. 584). After being blindfolded and having the position of the stones changed on the platter, describe a circle in the air three times with your left hand, at the last bringing the forefinger down on one of the stones. Try the

charm three times. Should you touch the white one twice your life will be full of light and happiness; if the gray twice falls to your share there will be shadows with the light.

New Friends

Old friends are treasures and cannot be too highly valued, but new ones also frequently prove to be added joys in our lives. To determine how many new friends you will find in the ensuing year, count the number of buttons on the dress or coat of the first person the fairies send to you after twelve o'clock at noon on October 31st. Should someone enter whose clothing shows no buttons, you will be obliged to rest contented with the friends you now possess, as no more will be added to the list until the expiration of a year.

Naming the Bedposts

Before going to sleep on the last night of October name each of the four bedposts, the first being "Art"; the second, "Science"; the third, "Literature"; and the fourth, "Business." The post you see first upon awakening will denote the pursuit in which you will delight. Should your eyes first rest upon the post called "Art," many beautiful things are in store for you. If the "Science" post is first seen, you will rejoice in deep learning, etc. Be sure not to get the posts confused; remember the order in which they have been named.

Witch Writing

Should you wish to know how any one of your friends may feel toward you, here is the test. Write your name out in full (Fig. 585—we will suppose the name to be yours). Under your name write that of a friend (Fig. 586), then carefully cancel all letters in the coupled names which are

the same (Fig. 587). Let us go over the first two names that we may thoroughly understand how it is done. Take the first letter in the first name—K; you will not find the same letter in either Mary or Hallon. Take the next letter —a; there it is in Mary and in Hallon. We will cross out all the a's. There are no t's in the lower name, so

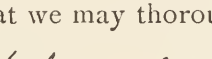


Fig. 585.

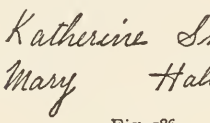


Fig. 586.

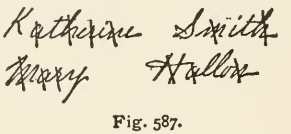


Fig. 587.

we go on to the next letter—h—which is an initial in Hallon and again occurs in Smith. Cancel them all. There

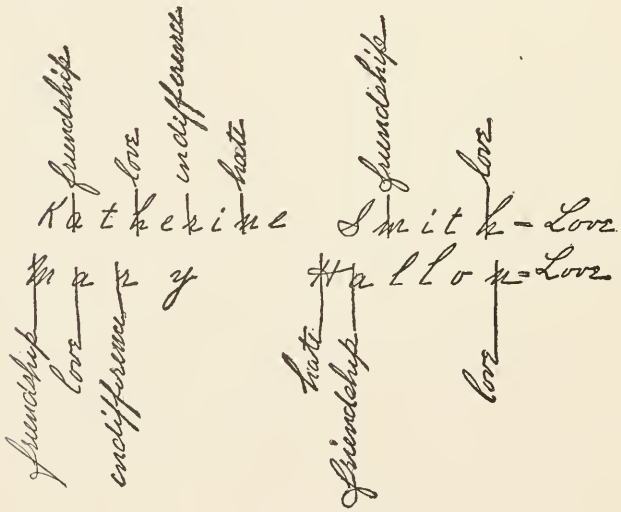


Fig. 588.

are no e's, but we find r and n in the other name. Mark them both. I is not repeated in the lower name, and in

Smith we find only m (h being previously cancelled), which is the first letter in Mary. Cross them out, then repeat aloud these potent words:

"Friendship—Love—Indifference—Hate,"

giving each cancelled letter one word in the magic order (Fig. 588). In this way you find that the girls love each other. Try your name with a number of others. The results constantly vary. Couple two friends' names together and put them to the test.

Home or Travel

Apple-seeds, too, will act as charms. Stick one on each eyelid and name one "Home" and the other "Travel." If the seed named "Travel" stays on longer than the other, you will go on a journey before the year expires. If "Home" clings better, you will remain at home. Again, take all the apple-seeds, place them on the back of your outspread left hand and with your loosely clenched right hand strike the palm of the left. This will cause some, if not all, of the seeds to fall. Those left on your hand show the number of

Letters

you will receive in the coming fortnight. Should all the seeds drop, you must wait patiently for your mail.

Your Fate

Gather up all the seeds and make them do duty again. There must be twelve of the little brown charms. Put them carefully to one side while you cut twelve slips of blank paper exactly alike and on one side of each write the name of a friend. Turn them all over with the blanks uppermost

and mix them so you will not know which is which; then holding the seeds in your left hand repeat this verse:

"One I love,
Two I love,
Three I love, I say;
Four I love with all my heart and
Five I cast away.
Six he loves,
Seven she loves,
Eight they both love;
Nine he comes,
Ten he tarries,
Eleven he courts and
Twelve he marries."

Stop at each line to place a seed on one of the papers, and then turn the slip over to discover the name of the one you love or cast away, as it happens. Continue matching each apple-seed with a piece of named paper, as you count, until all twelve seeds and papers are used. It is both surprising and interesting to have one's fate forecast in this way.

"Bobby" Burns's well-known poem "Halloween" tells of many charms and spells to be tried on "Witch Night."

Dreams

mean much on Halloween, but certain ceremonies must be carefully followed in order to insure the spell. Before going to sleep for the night have someone bring you a small piece of dry bread. No word should be spoken after this; silence must invariably prevail. Eat the bread slowly, at the same time making a wish and thinking of the pleasantest things imaginable. Then smilingly drop off to sleep, and your dreams in the land of Morpheus will be sweet and

peaceful, and your wish will come true if the charm works in the way it should.

Here is an old verse on

Shooting Stars

which has been handed down for generations:

"If I a shooting star can see
And before it falls count one, two, three,
I'll find my love in the nearest tree,
For I hunt him and he hunts me."

Watch for the star and when it comes, if your courage does not fail, look up a tree. Though you may possibly not find the desired sweetheart, you can make a wish on the shooting star, at the same time repeating these lines:

"Star, star, bright star light,
First star I have seen to-night,
I wish I may, I wish I might,
Have the wish I wish to-night."

An entertainment suitable for any season of the year is called the

Ghost Ideas

It is intended only for the older girls, not being adapted to little ones. The ghosts are jolly, bright, realistic beings, full of fun, who, being invited to your house, enter heartily into the frolic, each doing her best to make the entertainment a success. All the prominent past century ghosts must be included in the party. Artistic, dramatic, historic, literary, and political ghosts should be present, also the spirit of customs, ideas, events, and things belonging to the past century. Summon your fellow-ghosts to haunt

your house three hours before midnight, appearing in costumes appropriate to their earthly existence.

Tell them that not a word must be spoken until the company is relieved from the spell of silence and state in your invitation that all ghosts are expected to promptly signify their acceptance in writing, otherwise they will not be admitted to the haunt.

When the ghosts have assembled each character should be announced as she enters the reception-room, where the hostess and one or two other spirits of the occasion await the arrivals. The announcement must be made in clear, well-enunciated tones, and always be prefaced by the words "The Ghost." Guests after their introduction are allowed to speak and they should talk and act as nearly as possible like the spirits they represent. The event will then be a success if carefully planned, and you will have given to your friends a novel and delightful treat.

Fortune's Wheel

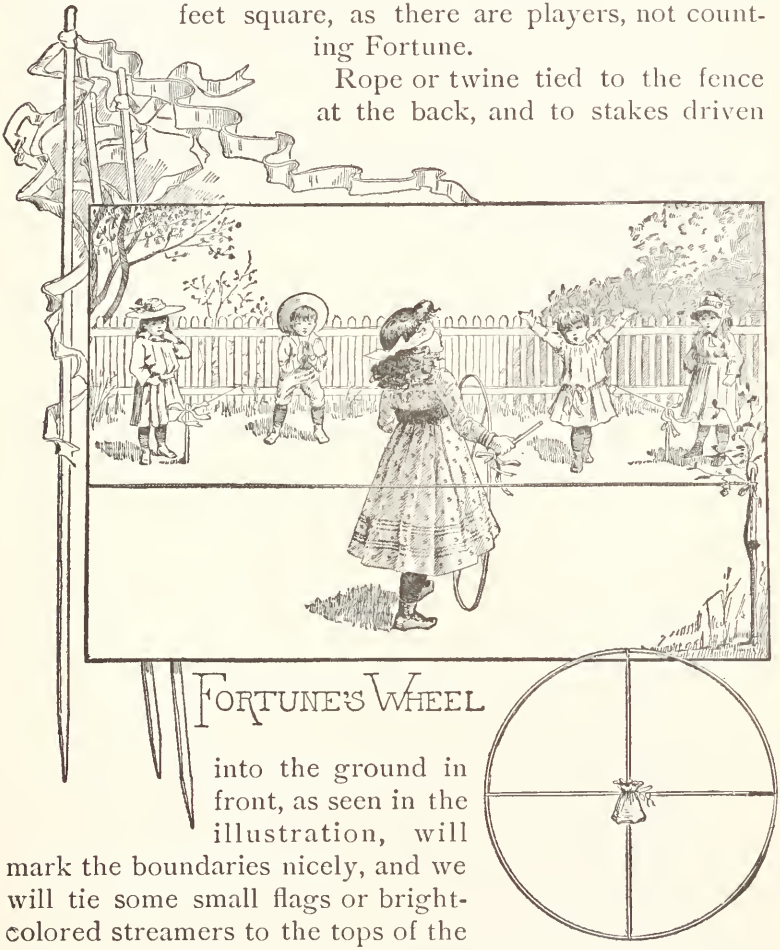
is a midsummer game for little folks. Such a beautiful, long day for a holiday, and no one remembers to keep it now, although many, many years ago Midsummer Day, the longest day in the year, was looked forward to with as much pleasure as we find in the anticipation of Christmas.

The people had strange beliefs in those days, and they thought a being called Fortune would send them gifts on this holiday if they went through certain performances to gain her good-will.

Now suppose we make believe, for a time, there is such a person as Fortune, and one of you shall play her part, and we will have a game of "Fortune's Wheel," which will be

very appropriate and interesting for June 21st. At one end of the lawn we will mark off as many spaces, six feet square, as there are players, not counting Fortune.

Rope or twine tied to the fence at the back, and to stakes driven



FORTUNE'S WHEEL

into the ground in front, as seen in the illustration, will mark the boundaries nicely, and we will tie some small flags or bright-colored streamers to the tops of the stakes to make them look pretty. These spaces we will call stalls. About ten yards from the stalls, and directly in front

of them, we must stretch a rope, tying it to stakes or trees, so that Fortune shall be kept within bounds.

Now bring your rolling-hoop, and we will turn it into Fortune's wheel by tacking two tapes across it, as shown in the diagram. In the centre, where the tapes cross, we will tie a little bag, which is to hold a gift.

Simple little toys, bonbons, and cake, only one at a time, however, are the gifts Fortune's wheel will carry.

Come, little girl, whoever is to be Fortune, whip out your handkerchief and tie up your eyes, for Fortune must be always blindfolded; then stand by the rope, which will keep you from going too far away.

The rest of you scamper off and take your places, each one in a stall.

Now, Fortune, walk up and down a little that you may not know exactly where you are; then, standing so that you can reach the rope with your hand, take your wheel and strike it hard, sending it down toward the other players.

Whoever catches Fortune's wheel may have the gift it carries, but no one must go beyond his stall to reach it. The wheel must enter a stall before it can be caught by the player in that stall, and when it enters a stall and falls to the ground before being caught, the player whose stall it is in must change places with Fortune, become Fortune, and roll the wheel. When the wheel stops before reaching the stalls and does not enter any of them it must be carried back to Fortune, who will roll it again.

Each time before the wheel is started the players in the stalls must change places.

When one gift has been won and taken from the bag put another in its place and Fortune will roll the wheel until all the gifts are gone and the game ended.

CHAPTER XXVI

LIVING ALPHABET

CHARACTERS: *All the letters of the alphabet, half girls, half boys; teacher.*

COSTUMES: *Girls dressed entirely in red, boys in white. Teacher wears a pretty Dolly Varden costume, and carries a white switch tied with red ribbon.*

The back of the stage is decorated with palms and other greens. The overture is played, which glides into a march as the curtain rises.

Enter the teacher and letters from the right. The letters march in single file in the order of the alphabet (alternately a girl and boy) headed by the teacher, who keeps time with her switch. After crossing the stage the teacher leaves the procession and stands at the left. The letters turn, march back to the right behind the advancing line, turn again, forming a reversed S, march to the left, then around the front of the stage to the right, marching in a circle until a half circle is formed at the back of the stage, where they halt and remain standing. Fig. 589 *shows the order of march. As the letters enter they carry their shields on their left arms; as they turn to the right they shift them onto their right arms, always keeping the face of the shield toward the audience. When standing the shield is held with both hands directly in front so that the letters may be plainly visible.*

TEACHER. Attention! Present a greeting to our friends!

The letters A E L S T U step to the front of the stage and stand in line.

TEACHER. Well, what do you say?

The letters change places and form the word SALUTE.

TEACHER. Very good. Retire to your places.

The letters step back in line of the alphabet.

TEACHER. We all know the alphabet is made up of two families. The name of one family is Vowel, and the name

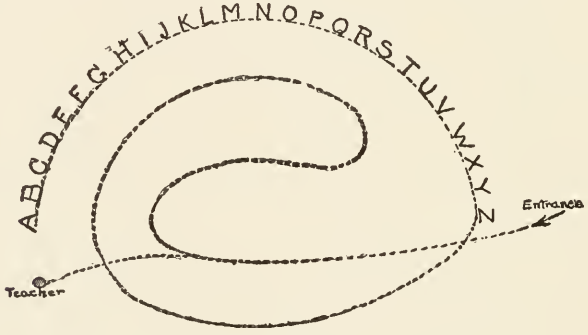


Fig. 589.

of the other is Consonant. The vowels will please step forward.

The letters A E I O U advance to the front.

TEACHER. There are two step-sisters which we sometimes call Vowels. Where are they?

The letters W and Y join the others.

TEACHER. That will do.

The vowels return to their places.

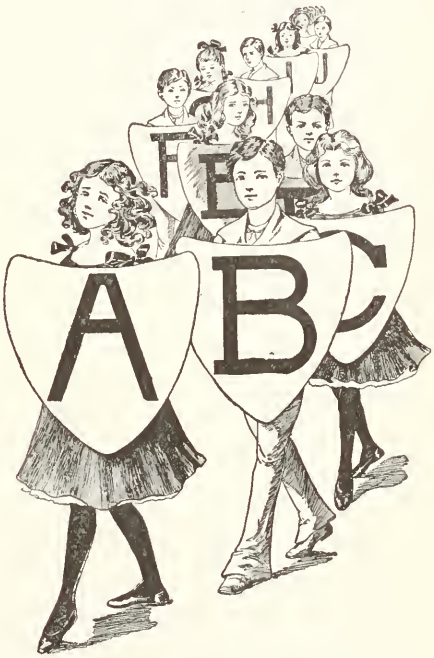
TEACHER. Consonants come forward!

All of the letters except A E I O U W and Y advance then W and Y join the consonants.

TEACHER. Very well.

The letters return to their places.

TEACHER. We will now have our spelling-class, and be careful that you spell correctly. The letters for "Cat" step forward.



The letters A C T run to the front and stand spelling ACT.

TEACHER. You are not spelling "Cat." Try again.

The letters shift their position to form TAC.

TEACHER. Dear me! You haven't got it right yet. I'm surprised!

The letters change, forming the word CAT.

TEACHER. Right at last. Now spell something that cats love.

The letters N I P join C A T, spelling CATNIP.

TEACHER. Can you spell another word?

C turns her back, while the others change places to spell PAINT.

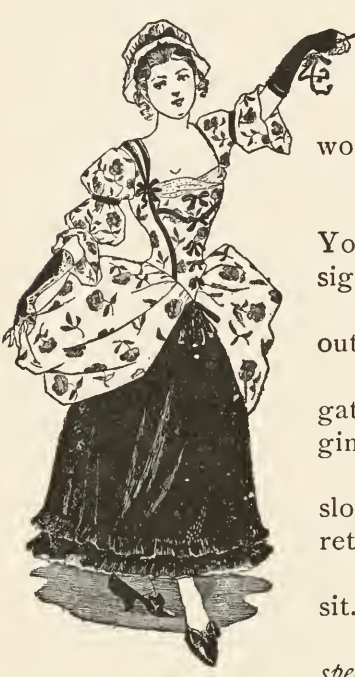
TEACHER. Another.

P turns his back, and the rest spell ANTIC.

TEACHER. Spell one more word.

P remains with his back to the audience, I turns away, and the others spell CANT, and then return to their places in the alphabet line.

TEACHER. Are you ready for your grammar? The letters Y E S run to the front, spell YES, and then retire.



TEACHER. Well, then, we will try verbs. Verbs signify action. Give me a word that denotes action.

The letters remain quiet.

TEACHER. I will illustrate. Your sister *runs*. What does that signify?

The letters A M O U S E run out, spell A MOUSE, and return.

TEACHER. We will try conjugating the verb "to be." It begins: I am, you are—well?

The letters T I R E D walk slowly forward, spell TIRED, and return to their places.

TEACHER. So am I; we might sit. What do we stand for?

Here, for the first time, the letters speak. A steps forward two steps, answers immediately, and steps backward to her place. Then B does the same, followed by each letter of the alphabet in turn.

A. A stands for Action, and that means to run.
B. B stands for Baker and also for Bun.
C. C stands for Catnip, the best of all tea.
D. D stands for Darling, and that stands for me.
E. E stands for Emerald, a most precious stone.
F. F stands for Fun and my own Funny-bone.
G. G stands for Gold, which is yellow and bright.

H. H stands for Hope, Heaven, Holy and Height.
I. I stands for Ink, which is not a good toy.
J. J stands for Jelly and Jumping and Joy.
K. K stands for Kitchen with a dear little stove.
L. L stands for Laddie and Labor and Love.
M. M stands for Maiden and Merry and May.
N. N stands for Nonsense and Noddle and Neigh.
O. O stands for Omelet and Only and Off.
P. P stands for Painter and Palace and Puff.
Q. Q stands for Quaker and Quiet and Queer.
R. R stands for Rabbit and Racing and Rear.
S. S stands for Sampler and Sewing and Shears.
T. T stands for Taffy and Tar-drops and Tears.
U. U stands for Upper and Under and Urn.
V. V stands for Vane, which the winds always turn.
W. W stands for Winter, snowy and white.
X. X stands for Xylite, I think I am right.
Y. Y stands for Yes, but never for no.
Z. Z stands for Zero, and now we must go.

Music. Here the march music strikes up, the pianist playing "Marching Through Georgia."

The teacher leads the procession, and the letters follow, singing to the air "Marching Through Georgia" these words:

We are going now, Alphabet at play,
Holding in our hands all that's grave or gay;
See how we are marching all the letters in array,
Marching onward to Dreamland

CHORUS.

Speak low, speak low, we sing a lullaby;
Speak low, speak low, pray children do not cry,
Though we now must leave you and say a sweet—

Here the letters G O Q D B Y leave the ranks and stand at the front of the stage. D places his hand over the quirk of the letter Q, making it an O, and they form the word GOOD-BY.

The march has carried the rest of the letters to the back, where they stand in a semicircle. The music accommodates itself to the movement, so that the GOOD-BY comes in at the right time, then all take up the song again with the words:

While we are marching to Dreamland.

Curtain.

After-word

The endeavor throughout this little play has been to keep it as simple as possible and quite within the capacity of the children taking part. The girls and boys should be well drilled in the marches, that they may keep step and perfect time, also in the song; and they should know to a certainty what places they are to take in spelling the words. Then if, when speaking, they enunciate clearly and speak slowly the success of the play is assured. Very slowly and clearly each word must be spoken, otherwise the meaning and point will be lost.

The character of the teacher should be taken by a young girl old enough to lead and direct children. The marches may be as elaborate as the manager chooses, but they should not be too long or intricate.

The shields are made of heavy white card-board after the pattern shown in Fig. 590, and the handles are strips of tin fastened in the middle of the shield. To secure the handle in place, with a sharp knife cut two horizontal slits about one inch long in the shield near the centre. These must be about five inches apart, and one directly over the other. Then make two more slits of the same size,

one two inches above the top slit, the other two inches below the bottom slit. Pass one end of the tin through the lower top slit, working from the inside of the shield, and bend the end up, slipping it back through the upper top slit as if taking a stitch; then fasten the end by bending it up close to the inner surface of the shield. Care must be taken not to tear the card-board during this process. Now reverse the order of work, and passing the other end of this tin through the two lower slits in the shield, fasten it by bending the end down. The loop of the handle must be sufficiently large to allow a child's hand to slide in and grasp it easily. When the tin is well wrapped in strips of cotton cloth there is no danger of a cut from the sharp edges.

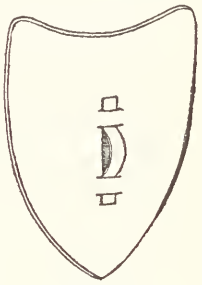


Fig. 590.

Large black letters are either painted on the shields or cut from black paper or cloth and pasted on. These letters must be simple and plain in design, that they may be instantly recognized. All the shields should be of one size, and as a rule should reach from the shoulder almost to the knee of the bearer. The children, also, should be as nearly of one height as possible.

CHAPTER XXVII

ODD GARDENS

SUMMER is coming! Don't you see it? Don't you feel it? Even while the trees are still leafless and the grass-plots still brown we know spring is here, almost as the plants themselves know it, by the surging up of new life in our veins.

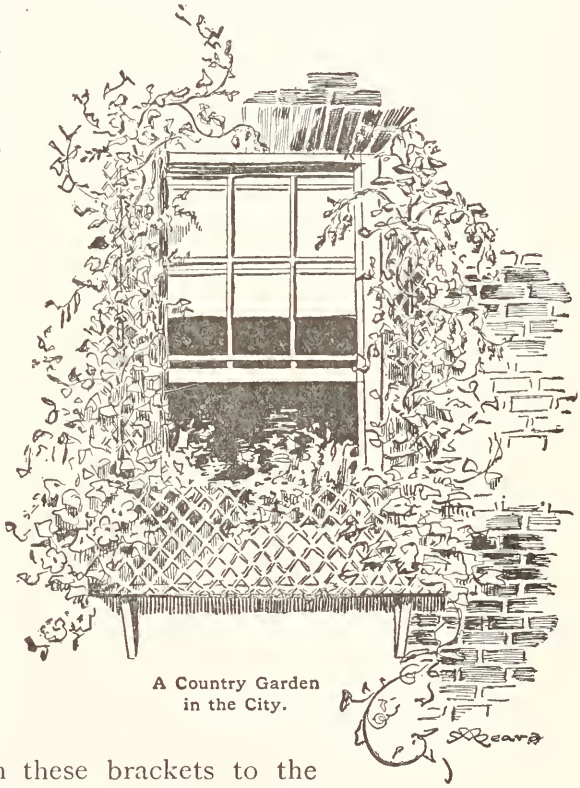
We open wide our windows to let the sweet sunshine in and make ready to welcome the blessed summer so near at hand.

What if you cannot leave the city, as some do, to enjoy the delights of a summer in the country; what if you have not even a foot of ground, you may still have some of the sweets with which summer is so lavish; you may, nevertheless, have your flower-garden. Summer will help you grow your plants. The sun is knocking now on your window, bidding you prepare the ground for summer to make fruitful.

A Country Garden in the City

A real hanging garden, with creeping vines and fragrant flowers, will prove a delight, and it may be yours though your window is your only garden plot.

Take your tape-measure and find the width of your window. It is about three feet wide, isn't it? Well, it doesn't matter. Whatever the width, add two feet more and you have the length for your garden. Thus, for a three-foot window you will have a five-foot garden. Go to the planing-mill and select a wide board of that length. See that it is without flaws, and do not be afraid of having it thick, for it must bear a heavy weight. Buy a pair of strong iron brackets, or very likely at the mill they will give you two three-cornered pieces of board like Fig. 591, which will answer the purpose as well. With screws fasten these brackets to the board, about half a foot from each end, as in Fig. 592. Near the back edge of the board, directly above the two brackets, screw in good-sized screw-eyes, as shown by A, B, Fig. 592. Measure the distance from the bottom edge of your board to the top of the screw-eye, as designated by the dotted line C in Fig. 593, and fasten strong



A Country Garden in the City.

hooks in the outer wall on either side of your window at the same distance above the window-sill. Be careful about your measurements and have your hooks just as far apart

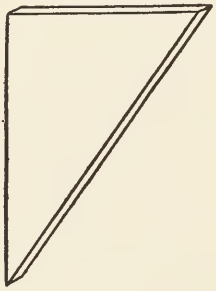


Fig. 591.

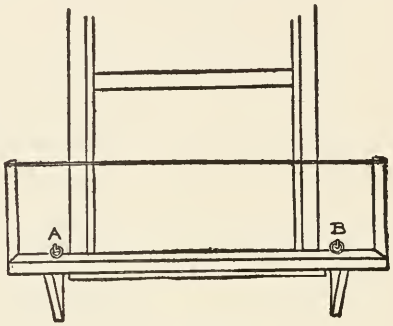


Fig. 592.

as the screw-eyes. Go to a hardware store and get a piece of wire netting, such as is used for fences, long enough to go around the front and side edges of your board. Have three strips cut from it, one eighteen inches wide for your garden fence, the other two each twelve inches wide and about three feet long for trellises for your vines. Fit the fence around the board, bending it sharply at the corners, and tack in place along the edge of the board, using double tacks, called staple tacks, for the purpose. Paint the board and wire netting dark green, and, when dry, lift it out of the window, and, resting the board on the outside window-sill, slip the screw-eyes on the hooks in the wall, as in Fig. 592. With two staple tacks fasten the ends of the fence to the wall.

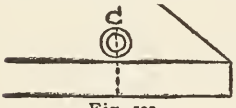


Fig. 593.

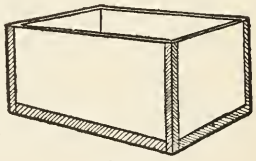


Fig. 594.

Now you are

Ready for Your Boxes

Get two strong wooden ones from your grocer, about eight inches deep and of a size to fit the board at either side of your window, and another to fit between the two end ones. Bore several holes in the bottom of each box, bind the edges where they meet with strips of tin, as shown by the dark strips in Fig. 594. Have the tinsmith cut the tin the required lengths and also bend it to fit your boxes. It will then be easy work to tack it on yourself.

Binding the boxes in this way makes them strong and prevents their bursting apart, as they are very apt to do with nothing to stay them. Paint the boxes dark green, like the board, and on the bottom of each place a layer of charcoal, next a layer of sand and then fill with earth, enriched with fertilizer obtained at the drug-store. Weave two straight sticks, about four feet long, in and out through each piece of wire netting for your trellises. Stand a trellis upright in either end box by pushing the end of the sticks deep into the soil.

It is a country, not a city, garden you want, is it not? Then don't be persuaded into buying geraniums, fuchsias, verbenas, etc. They are very lovely, but you can have them all winter long, if you wish. What you are trying for now is

A Real Summer Garden

—one where you plant the seeds and have the excitement of seeing them come up, then watching them grow, and finally of discovering the first buds which so soon are to blossom and reward you with their beauty and fragrance for all the care bestowed upon them.

Have you ever seen the hop-vine? It is very pretty, with its soft festoons of feathery tassels. The hop-vine, running up the trellis on one side of the window; the red bean, with its scarlet blossoms, on the other, will bring a bit of the country to you as little else can.

Around the front and side edges of the end boxes plant nasturtium seeds, and midsummer will find a wealth of tangled vines and fragrant flowers which will clamber over, under, and through your fence in wild abandon.

In the middle box plant bachelor's-buttons (corn-flowers), which blossom from July to late autumn with white, blue, and pink flowers. Plant also mignonette for its sweetness, and, to complete the country effect, add lady-slippers.

All these flowers are raised from the seed, except the hop-vine. For this you will have to get the "sets," which are the underground stems of the old vines cut into pieces. Three or four "sets" planted together will give you a nice vine.

One of the oddest of odd gardens is

A Water Garden

This, too, may be just outside your window if you are so fortunate as to have a balcony large enough to hold a good-sized tub; or one corner of your backyard may perhaps be spared for a place in which to rear your water-babies.

Half of a good, strong hogshead barrel makes a fine bed for a miniature pond; a molasses barrel will answer or any kind of tank that will hold water and is at least two feet deep can be used for the purpose.

Do not choose too shady a spot for your water garden. There are very few plants that are not the better for a little sunshine. An unsheltered corner which must endure the burning heat of the afternoon sun is also undesirable, but

a place which only the morning sun can reach will be suited to almost any water plant. You will need

Soil

as well as water for this aquatic garden, and if you are living in the city it will be a good idea to take a trip to the

Water Garden.

suburbs, where you can fill a tin pail with the muddy, fresh-water swamp soil. Failing that, you may procure from a florist some turfy loam and enrich it with a good fertilizer.

Fill the bottom of your tank with the soil to the depth of one foot and plant your roots before adding the water. It is a good thing to anchor the plants with stones to prevent them from floating out of place when the water is poured in.

For most of your

Water Plants

you will probably have to visit the country, as there appears to be no way of getting the simpler kinds but by going directly to Mother Nature and transplanting them from her garden to yours.

Before starting on your search make inquiries and learn what you may expect to find in the various localities.

Water lilies are not found on all ponds, but they are well worth any amount of travelling, and secure some you must, even if several trips have to be taken before they are discovered.

There is a water garden in our neighborhood which is a source of great pleasure to its owner. Floating on the surface of the water in two great stone tanks are pond lilies of several varieties. As the great buds grow and unfold they are watched closely and with intense interest until they are suddenly found full-blown, fair and pure, a floating mass of loveliness.

Any and every plant which grows in the ponds and swamps may be made to grow in an artificial pond or swamp in your own house or yard. The water arum or arrow-leaf; the pickerel-weed, with its spikes of pale-blue flowers; the sagittaria, whose flowers are white, and the water hyacinth are all pretty in the water garden.

There are vines that grow readily in water which you can put around the edges of the tank, allowing them to hang over and partially hide the outside. The Wandering Jew is one which is very hardy and will droop in graceful festoons of green. It is not a water plant, but will thrive in water and should not be planted in the soil at the bottom, but allowed to send out its roots into the water near the surface.

Aquatic plants are the simplest of all kinds to transplant, because the sun does not wilt them when their roots are kept wet. Transfer the plants in baskets filled with wet moss, or make them in packages covered on all sides with several wrappings of wet paper. They can be preserved an indefinite length of time *if kept wet.*

Cat-tail seeds will grow in mud; so will other swamp plants, and a swamp garden, kept always wet, may be an accessory to your water garden.

From time to time you must add fresh water to supply the loss by evaporation in the tanks, but as the growing things keep the water pure it does not need changing.

You may arrange smaller and

Simpler Water Gardens

for the window in glass dishes or bowls, or even glass jars, and grow there the small and delicate water plants. Only a layer of clean sand is needed for soil, and some plants do not even require that. The water-milfoil is an ornamental little plant; the eel-grass which, growing at the bottom, sends up its long spiral stems to lift its blossoms above the water, is interesting, and the horn-wort and water-purslane do well in narrow quarters. The duck-weed is a surface plant which drops its slender roots into the water without touching soil. Besides these there are

Plants Grown Artificially in Water

A friend of mine tells the story of a morning-glory vine which, growing in water, draped her window luxuriantly and even blossomed in a timid way. This plant was taken from the garden when its stem was several inches long and placed in a bottle of water, where it sent out more roots and grew rapidly.

It is possible, too, and is a very pretty experiment, to start the seeds without soil. Among the plants in my studio window, a short time ago, was a green glass finger-bowl filled nearly to the brim with water. On the surface of the water rested two layers of raw cotton cut to fit the bowl, and on top of the cotton were scattered a number of morning-glory seeds. They lay quietly on their soft, floating bed for a few days, then the seeds began to send out white worm-like shoots, and shortly there appeared on each a pair of small heart-shaped leaves tightly clasped together at the top by the now empty seed-shell. Soon down into the water, piercing the cotton, little thread-like roots made their way, growing thicker in mass and stronger as the young plants shot up in a wonderful growth. We watched them from their birth until they were three or four inches high, when an accident brought their existence to a close and our experiment to an untimely end.

Almost any seeds will sprout when treated in this manner, and in order to keep the water pure during the waiting period it is well to drop into it several small pieces of charcoal. Charcoal is a great purifier and its use is advisable in all water gardens.

The Green Sponge

appears quite marvellous to one who sees it for the first time. Take a large, rather coarse sponge, put it in a glass bowl, sprinkle it with sand and give it as much water as it will hold, then scatter all over it flaxseed or mustard seed, clover seed or buckwheat and place in your window. It will not be long before you have a sponge of living green, the secret of whose beauty lies in its being kept always wet.

Vegetables

of the tuber variety will grow, not in the water, but with water in them. The sweet potato, which puts forth a pretty vine, the white potato and the turnip have all proved successful experiments in my window, and it is said that the carrot and parsnip can be made to grow in the same way; their tendency, however, is to split at the sides, which allows the water to escape and causes them to dry up. I am told that another way to grow them is to immerse each half way in a bottle of water, keeping the vegetable suspended by means of a darning-needle thrust through it and resting on the edge of the bottle. In selecting potatoes choose those which have a number of well-developed "eyes," and avoid the sweet potatoes which look temptingly clean and smooth. In nearly every case these are kiln-dried, or dried by artificial means, and no amount of coaxing will induce them to sprout.

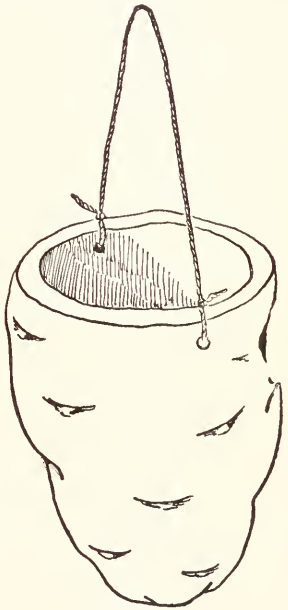


Fig. 595.

Take a large potato which will hold considerable water when hollowed out, cut off one end and clean out the inside to the depth of several inches. Puncture holes on opposite sides about half an inch from the edge, pass one end of a string through each hole and tie, leaving a loop at the top (Fig. 595), then fill with water and hang at the side of your

window, where it will not touch the glass nor get the direct rays of the sun.

In preparing the turnip remember to turn it upside down, as it is the root end you are to cut off; this is pointed and generally ends in a string-like root; the leaves sprout from the other end and form a pretty foliage. The turnip will not only send out its own leaves, but vines may be planted inside which will grow down to meet the upward growing leaves of the vegetable.

English ivy grows well in water, and you all know that the Japanese lily requires only a layer of pebbles in a dish of water to grow and blossom most beautifully. Hyacinths in their own peculiar glasses are also raised entirely in water.

Of other odd gardens which are full of interest there is one called a

Friendship Garden

This is composed entirely of plants given by various friends of the owner, and each plant is called by the name of the giver. Devote one flower-bed, large or small as the case requires, to your friendship collection, and set out all your plants there. They will probably form a strange medley; but so much the better, it will only make the queer garden the more interesting. Roses, geraniums, lilies, fuchsias, heliotrope, sweet violets—sheltered from too great heat by the larger plants—verbenas and mignonette may all grow in this odd companionship. Endeavor not to crowd them too closely and study the habits of each plant, that it may be kept from encroaching upon the rights of its neighbor, if aggressive, or be crowded out of existence if of a retiring and yielding nature. Give all equal care, and your love for each plant and its giver will also grow and blossom in a way most sweet and marvellous.

The Memory Garden

is in reality a collection of souvenir plants brought from various places one has visited.

You may have your memory garden in your window if you like, for your plants will probably not be large and very likely will do best each in its separate flower-pot with soil adapted to its needs.

From various parts of the United States, from foreign countries, from places of historical and geographical interest you can bring mementoes for your garden that will be beautiful reminders of the pleasant scenes and incidents of your travels.

CHAPTER XXVIII

ACTIVE GAMES

Weavers and Weft

IN this game there are two sides, so that only an equal number can take part. Each player is provided with a new, shallow tin pan, the parties then separate, and stand in two lines, facing each other, about eight or ten feet apart.

The starter at the head of one of the lines fastens one end of a ball of yarn to a door-knob or chair just behind her and, putting the ball on her pan, tosses it to the player directly opposite, who endeavors to catch it on his pan, and toss it to the person on the other side, who stands next to the starter.

The third player in turn sends it back to the one standing second on the opposite side (Fig. 596).

In this order, going back and forth, the ball travels down the ranks.

When it reaches the end of the line, it is started back again, and kept going until the yarn is all unwound.

In no case may the ball be touched with the hands. When it falls to the floor, it must be lifted up with the pan by the player who drops or fails to catch it, and when the

yarn fastens itself to the clothing, or becomes entwined around the body of a player, it must not be touched, no matter how much it may inconvenience the movements.

Great care should be taken not to break the thread, any-

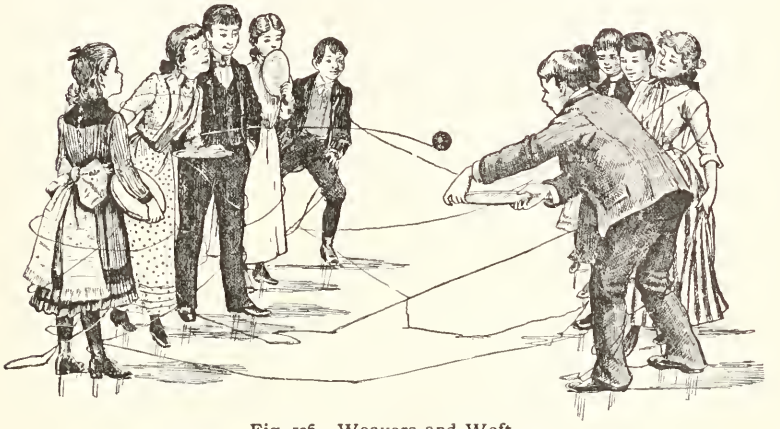


Fig. 596.—Weavers and Weft.

one doing so is counted out of the game, she cannot leave her place, however, for moving may disturb the yarn attached to others. The ends of the broken yarn must be tied together before the game is resumed.

When the yarn is all unwound it is the object of each player to loosen himself from the tangle without breaking the thread.

The time must be noted and five minutes only be allowed for the disentanglement.

At the end of this time the side which has the greatest number of members free from the meshes of yarn wins the game.

The flashing of the bright tin pans, the struggles of the players to catch the ball and elude the loose thread, the

comically careful movements of those who have become entangled in the yarn, all tend to make the game a very merry one, to the lookers-on as well as the participants.

Hoop Dance

Some of the games played with wooden hoops are full of fun, and the constant changing of position of the players forms a very pretty moving picture for the spectator.

Four boys and four girls make up the set for the "Hoop Dance," and chance allots the partners, in this way: A stick

The Hoop Dance.

is placed on the ground and the group, standing about twelve feet away, take turns in tossing small stones as near to it as possible. The girl and boy throwing nearest the goal take first position; the girl and boy throwing second nearest take the second position, and so on. The four couples stand quite a distance apart, at least six yards being allowed between those facing each other, as in Fig. 597. (Crosses represent boys and circles girls.) One of the players is chosen leader, and it is his duty to call out the different figures of the "Hoop Dance." At "Attention!" all take position and stand ready, hoop in hand, to respond

to the first call. The leader then prompts, "First and second couples cross over right and left." Immediately the two boys, B and F, move to the left, as in Fig. 598, in order to give space for E to roll her hoop between A and B, and

Fig. 597.

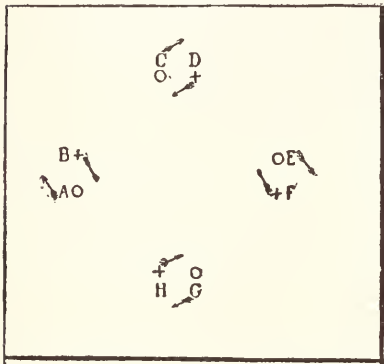
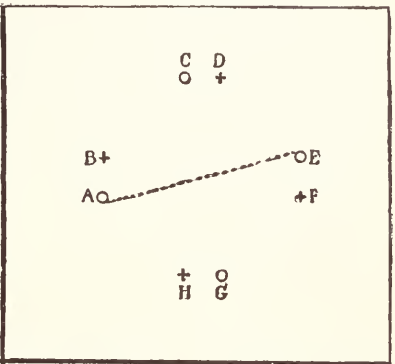


Fig. 599.



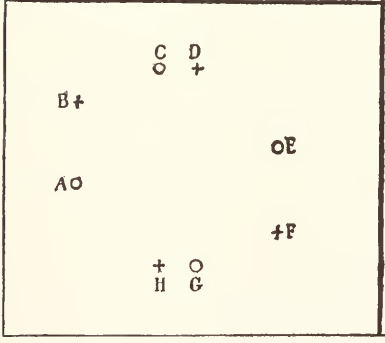


Fig. 598.

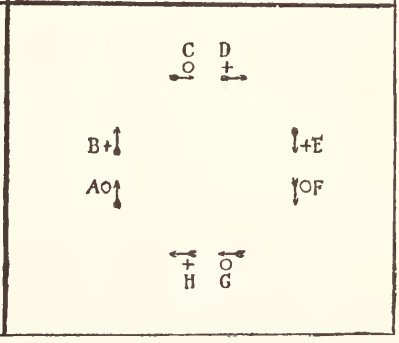


Fig. 600.

A to pass between E and F. As the leader prompts the two couples roll their hoops to the opposite sides. Then the leader calls, "Third and fourth couples right and left." They follow the example of the first couple, the boys H and D moving to the left to give space for C to pass between G

and H, and G to cross between C and D. The leader next calls, "First couples right and left back to places," and this movement is repeated by the last couples.

In the Second Figure

of the dance the girls of the first couples change places, as in Fig. 599, where A and E roll their hoops diagonally across the intervening space according to the dotted lines. This brings A in E's place and E in A's. Next the girls change places on the sides; C and G cross over to opposite sides. Then the leader cries out, "Girls of first couples return to places," and E and A roll their hoops back to first position. "The sides do the same." In like manner the boys change, first B and F, then D and H, and return to places, taking great care not to allow their hoops to fall or get beyond their control.

The Third Figure

is "Hoops all around." At "Attention!" from the leader each player turns, facing the back of the next player. Arrows point the direction players are to take (Fig. 600). A turns toward B; B faces C; C looks at D, and so on. Then, with hoops in position, at the word "Hoops all around" each player follows the companion directly ahead, rolling his hoop as he goes around the circle, stopping only when his original place is reached.

The Fourth Figure

Again the leader calls, "Attention." This time each player faces his partner, stepping a little to one side to allow the partner to pass (Fig. 597), which brings all the girls A, C, E, and G, facing the left and outside the ring,

while B, D, F, and H, the boys, face the right and are inside the ring. At the call from the leader, "Grand right and left," each player carefully rolls his hoop first to one side, then to the other of those whom he meets on his way around the circle, beginning with his partner (Fig. 597). The girl A passes to the right of her partner B, left of D, right of F and left of H. All the other players weave in and out in the same way, as in the ordinary quadrille, the only difference being that instead of the hands being grasped in passing the hoops are rolled to right and left. This figure concludes the "Hoop Dance." Should the players be all girls, let four of them tie handkerchiefs on their left arms to show that, for the time being, they represent the sterner sex.

The Game of Tag never loses its charm. Who can resist rushing after a companion at the words "last tag." No girl with any daring or enterprise can rest content until the compliment be returned. Somewhat differing from the original tag, but none the less attractive, is the game of the same name played with wooden hoops.

Hoop Tag

keeps one constantly on the alert. Any number may join in this game, and all, except one, must be provided with hoops and sticks. Decide who shall be "It" by some counting-out rhyme—such as

High peg, low peg,
Mary and Ann,
Tom, Dick and Harry,
Jim and Dan,
Roly Poly, cod and trout,
Stingelium, Stangelium,
You are out!—

This important person has a stick, but no hoop. From some particular starting-point determine the distance the players may roll their hoops before "It" is permitted to follow. The distance is optional—eight yards or so would do, the place being designated by a house, tree or fence, as the case may be, and made plain to all by "It" saying, "I'll stand here and give you all a chance to reach that tree"—or whatever the object may be—"before I follow." At the signal, "Are you ready? Go!" from "It," all except "It" start rolling their hoops in the same direction. As soon as the first player reaches the tree "It" calls out, "Coming!" and immediately follows. The other players hearing the word "coming" scatter in all directions while "It" endeavors to strike someone's hoop with her stick. When she succeeds the captive surrenders the hoop to "It," who scampers away with her prize to join the others. The loser, instantly becoming "It," starts in pursuit of the nearest hoop. She cannot, however, strike the hoop she has just lost until the player has had time to run several yards beyond her reach. The game continues until each player has been "It."

When at the circus, has not everyone seen the clown and other members of the sawdust ring jump boldly through a hoop held in the air? They perform the feat with such skill that it looks very simple, but it is less easy than it appears.

The Circus-hoop Game

though, is not difficult, for a wooden hoop takes the part of the clown. The game calls for one extra hoop large enough to allow the remaining hoops to pass through it (Fig. 601.) Count out to determine who shall be "It" and when that is decided let the other players take their places

at a given distance—about fifty feet—from the large hoop, which is held perfectly still in position by "It."

The object of the game is that each player, in turn, shall roll her hoop through the large one without allowing the rolling hoop to fall on its way to the other side of the large hoop. The first player to miss changes places with "It" and holds the big hoop, giving her smaller hoop to the first "It"; and the latter joins the ranks of the players, taking the last place in the row. The second to fail surrenders her hoop and in turn becomes "It." The game proceeds in this way until only one player remains who has not been obliged, through failure, to take the part of "It." Such a one is victorious and the winner of the game. No player is allowed to be "It" a second time in the same game. The second miss debarring her from any more trials, she drops from the line to await a new game, when she will be entitled to the same chance of winning as the others.

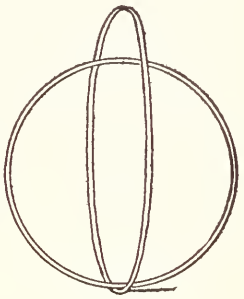


Fig. 601.

Racing always has its charm, and wherever there is a group of young girls, sooner or later there will be a race of some kind. There is no fixed number of players for the

Hoop Race Game

Still it is better not to have more than eight. In determining the couples who shall race together, eight slender sticks or broom-straws are used, making four pairs of straws, each pair of a different length. A player holds the straws in her hand, showing one end of each. They are placed evenly, all projecting out the same distance from the closed hand (Fig. 602). When each player has drawn

a straw and found her partner, who has its mate, the two holding the longest straws roll their hoops from the given starting-point to the goal previously determined. The distance should not be more than three or four hundred feet. The two players having the next two longest straws take second turn. Third place belongs to the two holding the next longest straws, leaving those with the shortest straws last. All who fail to win the first or trial race fall out of the game, and the four victors again draw straws for places as in the first trial. The two couples race, and then comes the final test between the last two victors, the other two having dropped out. The last trial is watched eagerly by the six who are out of the game and stand as spectators on each side of the course, cheering the players as they race after their hoops. The first to reach the goal in this run is hailed as the champion.

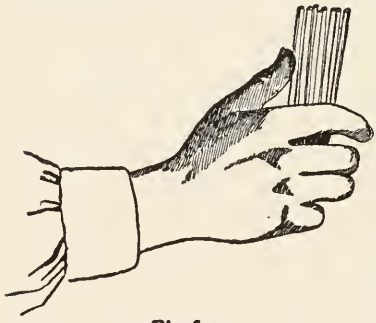


Fig. 602

When you learn to jump rope you acquire unconsciously at the same time a delightful sense of rhythm in addition to the exercise the sport affords. In the lively

Jumping Rope Conquer Game

the players choose a leader and use a long rope which is turned at each end by two of the players. The others, in turn, follow the leader, doing everything she does, even to the turn of the head and the movement of the hands. When all is ready, the rope turning evenly and steadily

toward the leader, she runs in and through to the opposite side without jumping, calling out "Follow me"; the other players do likewise. Then with the rope turning away from her she runs back in, jumps once and runs out on the opposite side. The others follow. Next the leader runs

Jumping Rope Conquer Game.

in, jumps once, then stoops and picks up a small stone or pebble, which has previously been placed near the rope, regaining her position in time to jump over the rope when it next comes to her feet. Again she stoops, lays the pebble back in place, jumps once and runs out. The others repeat this. The leader runs in, jumps first on one foot, on the other, then on both, and runs out. The others do likewise. The leader runs in, calling to one of the followers to join her. They face, grasp each other's hands and jump. Still holding hands they raise them over

their heads and jump. The others, in couples, follow in like fashion.

Should the leader at any time fail, she must take an end of the rope, and the one next in line becomes leader, while the player relieved from turning goes to the bottom of the line, her turn coming last. At the first miss of the second leader the player directly following takes the leadership; each follower becomes leader in turn. When one of the followers misses she takes an end of the rope, and the player released goes to the bottom of the line to await her turn. The game continues until each player has enjoyed the distinction of being leader.

Going to Market

is a jumping-rope game played by three or more. Two turn the rope, each taking an end; they walk along, turning as they go. The other players run in at the start and jump forward at each turn of the rope, keeping pace with the rope-turners. As soon as one trips she changes places with the player at the end of the rope. The point of the game is that the entire group shall keep constantly moving forward, each player being obliged to take an end of the rope when she fails.

In the game of

Passing By

a long rope is necessary and at least four players, two to turn and two to jump. If more join the game, they must divide into couples and take turns jumping, as the sport requires two to enter and jump the rope together. The places are taken as in Fig. 603. One player is stationed as near as possible to one end of the rope, and the other player close to the other end on the opposite side. As the rope

turns the players A and B (Fig. 603) advance, jumping toward each other. They meet, pass and continue on their way toward the opposite end of the rope until they have

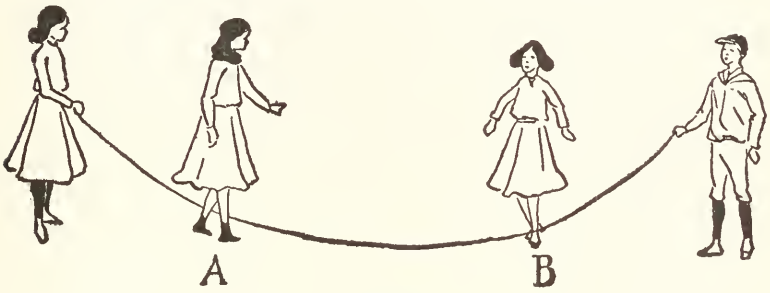


Fig. 603.

changed positions, A being in B's place and B in A's. They return to their first positions and run out, leaving the rope free for the next two to have their turn.

One of the liveliest rope games is

Red, White and Blue

A long rope is turned by two of the players; another runs in and jumps once; they all sing in chorus "Red, white and blue," slowly keeping time with the rope, which is turned three times high in air above the head of the jumper. The first turn is for red, the second for white, and the third for blue. As the turners lower the rope to the ground, without once stopping in the turning, the player jumps once, and again the rope goes up and is turned three times in the air while the chorus is repeated. Then, after another jump, all chant the words, "Salt, *pepper*, MUSTARD, VINEGAR," the rope turns very slowly for salt, faster for pepper, still faster for mustard and at lightning speed as vinegar is pronounced; the jumper increasing her speed at each turn of the rope.

CHAPTER XXIX

EXPENSIVE GAMES WITH LITTLE OR NO EXPENSE

EVERYBODY plays

Ping Pong

Young and old alike enjoy the game whose object is merely to strike a small ball backward and forward over a net stretched across a table. If you have never played the game it will seem very simple, but upon first trial you will probably realize that keeping the ball in motion is not as easy as it appears, for, instead of returning over the net in an orderly manner, the ball shows an uncontrollable inclination to jump down on the floor and hide in some obscure corner, thereby causing the player to enter reluctantly into a game of hide-and-seek with the tantalizing little object. However, it requires only slight practice to gain control of the ball, and the game is then very fascinating.

Any girl may have a set of Ping Pong, for she can make it at the cost of

Three Cents

The only thing in the game necessary to purchase is a celluloid ball, the price of which is three cents. Other implements needed are two rackets, a net, and the frame or stakes supporting the net. The racket can be manufactured from a piece of wooden box, or possibly a shingle

which is sound and free from knots. Wood about a quarter of an inch thick, or more, is best for the purpose. Cut a paper pattern first as a guide for the shape of the racket. Take a piece of paper twelve and a quarter inches long and six wide; fold lengthwise through the centre and cut according to dotted lines in Fig. 604. Open the paper pattern and place it over the wood; with a lead-pencil draw a line completely around it, then carefully saw or cut out the racket, and smooth down the rough edges with sand-paper; make the second racket in the same manner. The head of the racket should be seven inches long and six wide, the handle five and a quarter inches long and a trifle over one inch wide (Fig. 605). Saw the stakes from the handle of an ordinary hearth-broom, or from any strong, slender round stick. Make each stake eight inches long and notch it at the top (Fig. 606). As a support for the stakes use a strip of board three inches wide, not more than one inch thick, and about four feet long. If you have no auger to make two holes in the

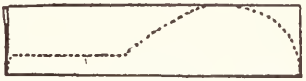


Fig. 604.

Fig. 605.

Fig. 606.

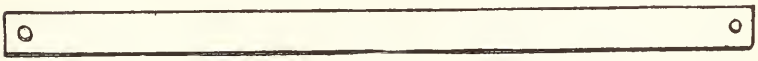


Fig. 607.

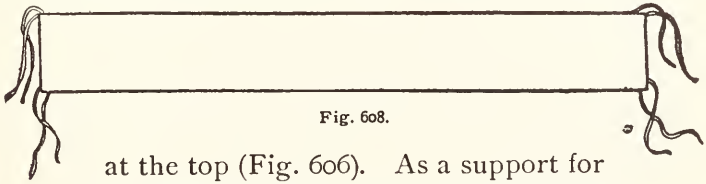


Fig. 608.

board for the stakes, burn them through the centre of the ends with the red-hot point of a round poker (Fig. 607). Be careful not to make the holes too large, have them rather

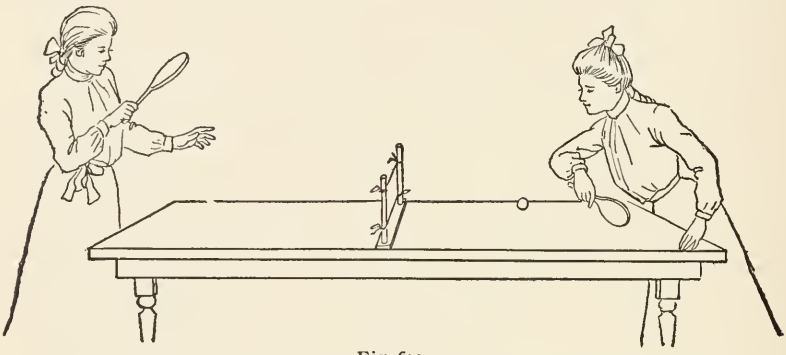


Fig. 609.

small, that the stakes when fitted in may be tight and firm. A strip of almost any kind of cloth six inches wide, hemmed top and bottom and cut long enough to stretch taut entirely across and above the board, when tied from stake to stake, may serve as a net. Mosquito netting or turkey-red cotton cloth make satisfactory strips; use whatever material is most convenient. Fig. 608 shows the net with two narrow tapes sewed at the four corners for tying it to top and bottom of the stakes. Stretch the net across the centre of a table, preferably a dining-room table, bring forth your rackets and ball, and practise playing Ping Pong with some friend, each standing at one end of the table (Fig. 609).

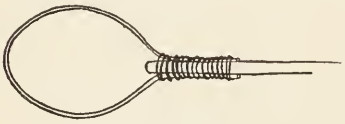


Fig. 610.

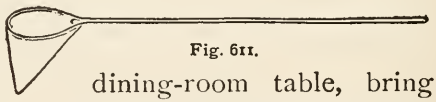


Fig. 611.

A retriever is sometimes used for picking up the ball

when it falls to the floor, and, though not necessary, will be found very useful, especially for beginners. Get a strong, slender stick about a yard long and fasten a small hoop of metal or wood on one end by binding the turned-up ends of the hoop securely to the stick (Fig. 610). Test the fastening and be sure that it is firm and strong, and that the hoop does not wobble. Then sew a little cloth bag on the hoop (Fig. 611) and the next time the ball falls to the floor scoop it up with the retriever.

The Rules

are similar to lawn tennis, but there is no second service, as in lawn tennis.

The game of Ping Pong is generally for two, though four players may take part. The double game will afford great amusement if but two rackets are used, as the player must lay her racket down each time for her partner to use.

The player who first strikes the ball across the net is called the server and the other player is called the opponent. The idea of the game is to serve the ball so as to strike the table on the opposite side of the net. The ball is then in play. If it drops into the net, or does not strike the table, it counts in favor of the opponent.

The opponent to whom the ball is served must endeavor to return the ball over the net so that it will strike upon the table. The ball is thus sent back and forth until one player or the other fails to get it over the net so that it will bounce upon the opposite side of the table.

The ball is in play so long as it strikes the table-top and can be taken on the first bounce. Striking before the ball bounces is not allowed.

When the game is finished the server becomes opponent and the opponent server, and so on, alternately.

If the ball in play strikes any object above or round the table before it bounces on the table-top itself (net or post excepted) it counts against the player.

The server wins a stroke if the opponent fails to return the ball or returns the ball in play off the table.

The opponent wins a stroke if the server serve a fault, or fails to return the ball in play, or returns the ball in play so that it falls off the table.

No volleying is allowed; but as long as the ball touches the table-top it is in play and can be taken at half-volley. The opponent loses a point if he takes the ball on the volley.

The player who first wins six games wins a set.

The service must be strictly underhand and delivered from behind the end of the table.

Scoring

Your opponent scores—If you do not return the ball; if you strike the ball before it touches the table; if the ball bounces twice.

You score—If your opponent strike the ball out of play or bounces the ball his side of the net.

On either player winning his first stroke, the score is called 15 for that player; on either player winning his second stroke, the score is called 30 for that player; on either player winning his third stroke, the score is called 40 for that player, and the fourth stroke won by either player is scored game for that player, except when both players have won three strokes (40 all); the score is then called deuce, and the next stroke won by either player is scored advantage to that player. If the same player wins the next stroke, he wins the game; if he loses the next stroke, the score is again called deuce, and so on, until either player wins the

two strokes immediately following the score of deuce, when the game is scored for that player. In naming the score the server is always mentioned first, for convenience, as 30–15, signifying 30 for server and 15 for opponent.

Terms Used in Ping Pong

Let means that the ball, while being served, touches the net in passing over, and the server has the privilege of serving again. If the opponent makes a let stroke it counts, the same as if the ball had cleared the net.

Volleying means striking the ball before it bounces.

Half-volleying means striking the ball just as it bounces.

Underhand stroke means striking the ball with the head of the racket pointed downward.

Overhand stroke means striking the ball with the head of the racket pointed upward.

All means same score for both players—as 30 all, meaning 30 for server and 30 for opponent.

Deuce means a tie.

The Game

Begin by taking plenty of time and serving slowly. Remember to strike the ball lightly; too much force will send it flying to the other end of the room, which is to be avoided. Keep cool and think what you are doing.

Your mind must be centred entirely upon the game. Grasp your racket close to the head, and when serving keep your racket down; the ball must not be held above the waistline and must be served beyond the end of the table.

The writer once knew.

A Little Girl who was Very Fond of Playing

out of doors, and when confined to the house by inclement weather, a bad cold, or some other disagreeable thing, was

very apt to grow restless and fretful, complaining always that she did not know what to do. She had any quantity of beautiful toys, but, as she said, she was tired of them all.

Then it was that the family would induce her to try to make something for herself, and when once she became interested in her work, and found that by her own ingenuity she could manufacture, from odds and ends, many interesting little toys, her restlessness vanished, and she was once more cheerful, happy, and contented.

At one time she had a book presented to her which gave the patterns and directions for making a few little articles—a very few it seemed to her, for she speedily did all the work laid out there, and was again thrown on her own resources for new ideas.

A Make-believe Sewing-machine

When she was quite a small child, too young to be allowed to sew on a real sewing-machine, she constructed a machine which, with the aid of her imagination, did very good work. Of course she could not really sew on it, but neither could she have done so had it been a "sure-enough" sewing-machine, and there was sufficient reality about it to make her play very absorbing.

The small wheels on top went round with a whiz and a whirr that filled her soul with delight. There were two wheels, because they were the remnants of a mechanical toy, a horse and sulky, which was once driven by a handsome tin jockey. The horse and jockey were gone, but the wheels and machinery remained. The key to the clock-like works was likewise missing, but it was very easy to wind up the spring by turning one of the wheels round and round a number of times. Once wound up, the wheels were bound to go until the machinery ran down again, and it

was while going at full speed that the pretended sewing was done.

No, these two wheels were not all of the sewing-machine by any means. There was the arm made of pasteboard, with needle attached, which, shaken by the vibration of the turning wheels, moved up and down quite naturally. All this was on top of a small table, underneath was the treadle made of the back of an old geography laid across a piece of kindling wood. The treadle would sometimes slip out of place with the rapid movement of the little girl's feet, but that was of no consequence, since it was only the work of a moment to replace it. The fact that there was no large wheel mattered nothing either, for the little seamstress felt her feet moving up and down, saw the wheels whirling on top, and was satisfied without a wheel that could not be seen anyway.

The sewing-machine was such an ambitious idea that it required some imagination to carry it out successfully, but there were other things this little girl made which were quite complete in themselves, such as toy houses, furniture, and dolls.

Knowing how thankfully this same little maid received any suggestions which would assist her in the manufacture of her home-made toys, I take it for granted there are other children who will be just as grateful for new ideas and who are just as happy in carrying them out. If you happen to be such a little girl, you will be glad to learn about this impromptu game of croquet which you can make for yourself in half an hour and enjoy the use of for many a long day.

To Make a Parlor Croquet Set

Diagram No. 612 shows the arches, of which there must be nine, all made of wire bent in the shape you see,

with each of the ends thrust into a button-mould. To prevent the wire from slipping out, fill the holes with beeswax, and then push the wire in; this will make the arches quite strong and steady.

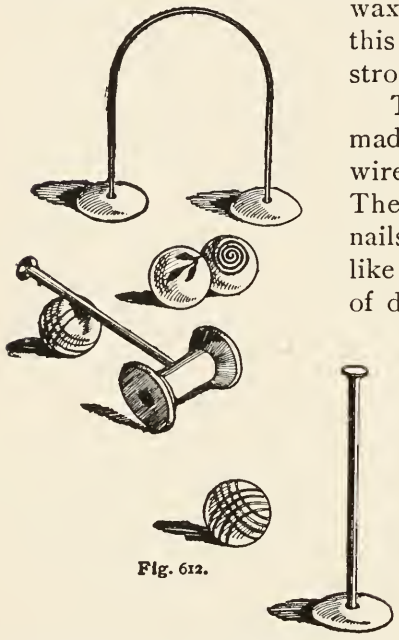


Fig. 612.

The mallets, as shown, are made of empty spools, with long wire nails driven in for handles. The stakes are made of wire nails stuck in button-moulds, like the one seen at the bottom of diagram No. 612. You will need two stakes and four mallets. Marbles, all of the same kind, but with different markings, take the places of croquet balls.

Not an expensive set of croquet, surely. The spools, wire, button-moulds, and nails you will probably find in the house, and the marbles also, if you happen to have a small brother; if not, you can buy them seven for one cent.

How to Arrange the Game

The parlor croquet should be played on a good-sized table covered with a woollen cloth. Place the stakes and arches in the position shown in diagram No. 613. Let the stakes stand forty inches apart. Place arch No. 1 four inches from the starting stake, arch No. 2 four inches from No. 1, arch No. 3 eight inches to the right and one inch in advance of No. 2, arch No. 4 twelve inches in advance of

and on a line with No. 2. Begin at the other stake and place the arches at the same relative distances.

Rules for Playing

First—The object of the game is for each player to send her ball through each arch in turn, beginning at No. 1 and using her mallet for striking her ball. When a ball has passed through arches Nos. 1, 2, 3, 4, 5, 6, and 7, according to their numbers, it must strike the stake just beyond No. 7, then returning through arches 7 and 6, it must move on through No. 8, through No. 4 again in the direction opposite to the one taken in its first passage; then through arches Nos. 9, 2 and 1, striking the stake to "go out," and the first player to do this wins the game.

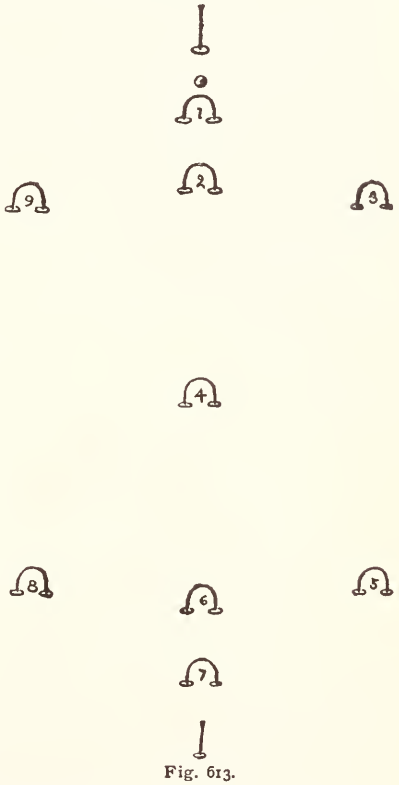


Fig. 613.

Second—To decide who shall open the game, or be the first to play, each player in turn shall place her ball (marble) directly under the first arch and play for the stake. The one whose ball, after playing, stands nearest the stake has the privilege of the first turn, the next nearest the second turn, and so on.

Third—The first play with each ball shall be made after placing it half way between the starting stake and arch No. 1, and the player may aim for the arch or any ball which has entered the game, or may send her ball in any direction she may choose.

Fourth—A ball failing to make its first arch must remain where it rests until next turn; passing through its arch gives the player another play.

Fifth—When a ball strikes another the player may croquet or roquet the ball in any direction she wishes, and then have another play. No ball may croquet or roquet another more than once in one turn unless it passes through an arch or strikes the stake between the croquets.

To croquet a ball the player places her ball touching the one it has just struck; then, resting her finger on her own ball to hold it steady, she strikes her ball with her mallet, sending the other in any desired direction. To roquet a ball the player places her ball touching the one just struck and strikes her ball, moving them both at the same time.

Sixth—A ball rolling off the table must be replaced at the point where it went off two inches from the edge.

Seventh—When a ball has passed through all of the arches it becomes a "rover," and need not strike the starting stake and go out until the player wishes. A rover has the privilege of croqueting or roqueting any or all of the other balls in each turn, but may play on each ball only once during one turn.

Eighth—The game may be played with partners, or each may play for herself. When there are partners each side takes a turn alternately.

A Dash for the Goal.

CHAPTER XXX

BASKET BALL

ITH the opening of the basket-ball season the girls are all wide-awake, interested, and eager to enter the teams; there is an exciting dash and life about the game which renders it very fascinating.

If you can organize a set of ten players and divide the

Cost of an Outfit

among the girls, each contributing an equal portion, the individual expense need not be exorbitant.

The price of a good basket ball is four dollars, and a pair of goal baskets the same amount, making in all eight dollars, just eighty cents each, a small amount when compared with the fun, health, and general benefit to be derived from the sport. The expense will be even less if shared by the officials.

It is optional whether you play indoors or out of doors; the game is suited to either place. The size of a

Playing Ground

varies in different localities, being regulated according to available space, but it must not exceed 3,500 square feet.

Mark out your field, making the width less than the length, according to Fig. 614. If indoors, use black paint for marking the inch and a half wide boundary lines; if out in the open air have the lines white, of the same width as the black, and made with either whitewash, chalk, paint, or plaster-of-paris.

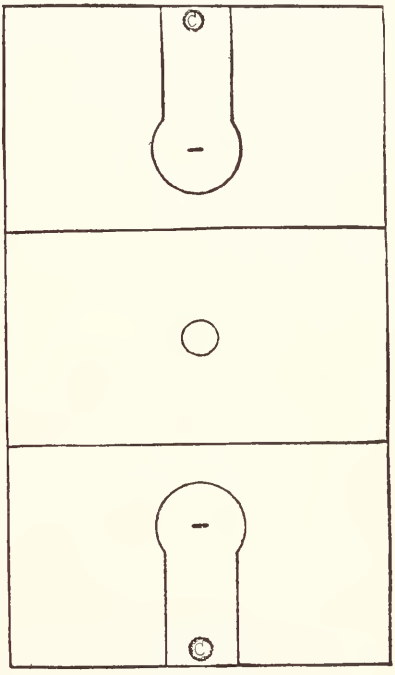


Fig. 614.

You must have the side boundaries of the field at least three feet from the wall or fence, and the end boundaries directly below the pole or wall surface against which the basket goals are placed. The inclosed field is divided into three portions (Fig. 614). Two more inclosures are necessary, called foul limits; make them inside the two end divisions, Figs. 614. The boundary line of the curved end must be equally six feet distant all around from station line indicated by a short straight line in the centre of the inner end of foul limits in both divisions; the station line must be fifteen feet from the goal or outer edge of basket; the space across from the straight lines of the foul limits must measure six feet.

Mark centre of field with a circle of a foot and half radius (Fig. 614), or two lines one and a half feet apart. If marked by circle the girls playing centres must stand

within it; if two lines are used they must toe the lines. Hang your

Baskets

ten feet above the ground on the centre of each extreme end boundary line (Fig. 614, C and C). Be perfectly sure that the basket goals are firmly fastened in place and rigidly supported either on a strong upright pole, or on a wall surface. If on poles it is better to have a screen six feet wide and four high as a background, though this is not absolutely necessary. During practice and ordinary games leave the netting open at the bottom of the basket, that the ball may fall through the basket to the floor or ground beneath, it being difficult for girls to get the ball out of the basket when it is closed at the bottom. Using a pole to push the ball out is not always attended with satisfactory results, and the effort consumes valuable time and strength.

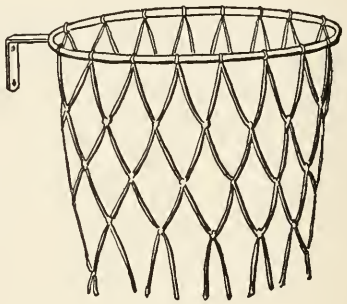


Fig. 615.

The baskets are called the goals; usually they are hammock nets of cord, sometimes metal chain links; they are always suspended from metal rings eighteen inches in diameter (inside). The back part of the metal ring is fastened to an iron bar which extends six inches from the pole or wall to which it is attached (Fig. 615). The

Ball

is round and hollow, composed of two layers, an inside rubber bladder and an

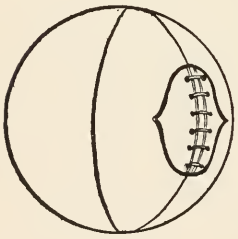


Fig. 616.

outside cover of leather. The rubber is tightly inflated and the cover so laced that it cannot be caught or held by the lacing. The ball measures from thirty to thirty-two inches in circumference and weighs from eighteen to twenty ounces (Fig. 616).

The usual

Set of Players

is ten, making five on each side, though the game is occasionally played with more. The set sometimes numbers as many as twenty members, ten on each side; but such teams are rare, and generally undesirable. Large teams crowd the field to such a degree that very little skill is required to reach the goal, and action to a great extent is rendered almost impossible.

Each side chooses its own

Captain

who must be one of the five girls constituting the side. There are always two captains in a game, and they should be selected with care, as much depends upon their proper qualifications for holding the office. In addition to other duties, the captains toss for the choice of goals, are active players in the game, represent their respective sides, and are entitled to call the attention of the officials to any violation of the rules which they may think has occurred; it is their further duty to furnish the scorer with lists of their sides, giving the positions of the players. The captain appoints the forwards, guards, and centre.

The game calls for nine more girls; these do not take active part in the play, but hold positions as officials. The officials with a set of ten players necessitate nineteen girls for the usual game. The nine

Officials

are one referee, two umpires, a scorer, a time-keeper, and four linesmen. Always choose your

Referee

at least four days before the game. She must be absolutely neutral and perfectly impartial; to her belongs the honor of holding the most important office in the game. It is the referee's duty to see that the regulations respecting the ball, goal, and grounds are adhered to.

By mutual agreement of the captains, the referee may allow alterations in the rules regarding time and grounds, but not as regards goal, ball, or team. Before the commencement of the game she must ascertain the time for beginning, or any other arrangements that have been made by the captains.

The referee must watch the ball constantly, following it wherever it goes. She must know at all times the whereabouts of the ball, as her office constitutes her judge of it, and she must decide when the ball is in play, to whom it belongs, and when a goal has been made. Every time the ball is put in play the referee tosses it up, she alone having the right to do so. The referee calls time, when necessary, by blowing a whistle, and she must always call a foul when any player addresses an officer. No player is allowed to talk to the officials, though anyone may speak to the captain and the captain can address the officers; in that way only are the players able to communicate with the officers.

The referee decides all questions not definitely falling to the umpires and linesmen, scorer and time-keeper, but is powerless to alter a decision of the umpire or linesmen regarding matters under their jurisdiction.

The referee instructs the team when to play, and either side refusing to begin the game within three minutes after the whistle sounds forfeits the game.

The referee's term of office expires at the conclusion of the game, and her decision awarding the game must be given then, as she no longer has power to act as referee. The referee must disqualify members when they are guilty of shouldering, tripping, striking, kicking, hacking, or of intentional or unnecessary roughness of any kind. These constitute fouls, and the referee overlooks the first offence, but not the second. When a player is disqualified she must drop from the game and a substitute take her place. A foul is a violation of the rules, whether committed unintentionally, ignorantly, or otherwise; the only guide an officer has is the cold fact that a foul has been made.

Each team chooses its own

Umpire

who must be a thoroughly competent and impartial girl. The umpires call all fouls except cases coming under the authority of the referee; when the fouls are made by players crossing the field lines, linesmen judge them.

Each umpire makes her own decision independently of the other, but a foul called by one umpire cannot be questioned by the other. The umpire calls time by blowing a whistle when stating a foul and indicating the offender; she reports to the scorer the player at fault and the nature of the foul. The referee appoints the

Scorer

who must keep the score. She must be perfectly neutral. It is the scorer's duty to notify the referee when a player

should be disqualified for any kind of roughness. The referee appoints the

Time-keeper

who must be exact about the time, noting when the game starts, and blowing her whistle at the expiration of the actual playing time in each half previously agreed upon by captains and referee. The time-keeper must take out time when called upon to do so by the referee. The captain is privileged to ask the referee to call time for an injured player or when a difference has occurred between the captain and an official. The half game is generally fifteen minutes, making the entire game thirty minutes, not counting the intermission. The playing time may be shortened to ten minutes for each half or lengthened to twenty for each half. The referee only may order time deducted for necessary stoppages, should any occur during the game. The four

Linesmen

are appointed by the referee; two for each side. These four girls usually stand at the four corners of the centre division, and it is their duty to report if any of the players step on or cross over the dividing lines. Such offences are counted fouls. When the ball happens to be thrown outside the field boundary lines the players are allowed to rush after it, but are not allowed to go beyond the dividing lines when in the field.

All the girls should be in their

Places on the Field

ready to begin the game at the appointed signal. Fig. 617 will assist you in gaining a clear understanding of the differ-

ent positions occupied by the various members of the team when in position to commence play. The object of the game is to *throw the ball into the opponent's basket*, and this is best accomplished by the girls being coupled with opponents and stationed at various places all over the field. In Fig. 617 the girls on one side are represented by circles, those on the other side by crosses. We will suppose that the two captains have tossed for goals, and that to the circles has fallen the goal G and to the crosses the goal H. In the centre of the field are grouped three girls, one player from each side, and the referee, who is here indicated by a triangle.

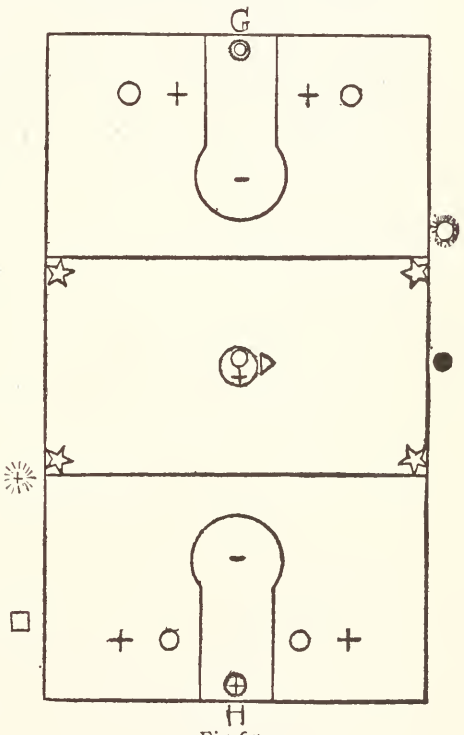


Fig. 617.

The referee stands with the ball in her hands, facing the other two girls, having her back turned toward the side of the field (Fig. 617).

It is optional on which side of the centres the referee is stationed.

The two players stand facing each other with their sides turned toward the referee, and each has her back toward her own goal (Fig. 618). These two players, circle and cross, are known as

Centres

There are always two centres in a game, and it is their duty to jump quickly for the ball as it leaves the hands of the referee, who opens the game by tossing the ball vertically in the air immediately between and not more than two feet from the centres. Fig. 618 shows the referee ready to toss the ball. Each centre endeavors to catch the ball and pass it to one of the forwards on her own side, with the hope that it may, sooner or later, land in her opponent's basket; at the same time she tries to prevent the ball from being passed by the opponent's guards across the centre of the field toward her basket.

Fig. 618.

The centres must confine their play within the central space; they cannot step across the dividing lines running from side to side of the central division of the field. In each of the end divisions are stationed two girls called forwards and two others known as guards; their duties are implied by their titles. The forwards endeavor to forward the ball to their opponents' basket, and the guards guard their own goals, striving to prevent the opponent forwards throwing the ball into their basket. In Fig. 617 the circle

Forwards

are in the end near their opponents' basket H, that they may have a better opportunity of sending the ball into it, and

the cross forwards are on the other end of the field near the circle's basket trying to engineer the ball into that goal. You will notice that the guards on each end protect their own basket. Standing by each cross forward is a circle

Guard

who endeavors to prevent an opponent from succeeding in her efforts for the goal, and on the cross end of the field the two cross guards are trying to protect their basket from the circle forwards.

The stars in Fig. 617 stand for the four linesmen, who must be continually on the *qui vive* and report if a girl steps over the dividing lines.

Each umpire watches both sides; generally one umpire walks about just outside the field boundary line on one side of the field, and the other walks just outside the boundary on the other side of the field. It is optional which side they take, but they should not both be stationed on the same side. Fig. 617 shows the circle umpire on the right hand, and the cross umpire on the left hand of the field. The umpires are designated by circle and cross, with rays extending all around them.

The time-keeper stands outside of the field, that she may not interfere with the action of the players; other than that restriction, she may move as she pleases. In Fig. 617 the time-keeper is denoted by a round black spot.

The scorer must also keep out of the field proper and have her mind on her portion of the work. In Fig. 617 the scorer is designated by a square.

When all stand ready the

Game

begins. The referee tosses up the ball, and every one of the players on the field eagerly watches the two centres as

they strive to catch the ball. The centre, gaining the advantage, endeavors to toss it to a girl on her own side, while the other centre does all in her power to prevent the ball from reaching its destination, often running in front of the victorious centre, blocking the way and still further interfering by throwing up her arms. If the first centre succeeds in tossing the ball to one of the forwards on her side, that forward immediately strives to get the ball in the opponent's basket, but is constantly followed and opposed by the opponent guard, who endeavors to frustrate the play. Should the forward decide that the chances for gaining the goal are better if she throws the ball to another girl on her side, she does so with the hope that the other forward will succeed in caging the ball. If, however, the last forward be baffled, she tosses the ball either to her own centre, back to the first forward, or over across the field to one of her own guards, anywhere the rule permits in order to keep the ball from the hands of the opponents.

If one of the opponent forwards succeeds in capturing the ball she tries either indirectly, with the aid of others on her side, or directly, by her own exertions, to cage the ball in the basket of the opposite side.

The centre catching the ball from the referee is privileged to throw it to any player on her own side, either forwards or guards, at one end or the other of the field, her action depending upon circumstances. Sometimes it is more advantageous to toss the ball in one direction, again it is better to throw it in another. Therein lies the secret of good playing, the ability to see opportunities in time to profit by them and quickness and accuracy in measuring distances, so that the ball may land where the player intends to send it, not falling short or getting too far. The opponent centre constantly follows the centre having the ball, and is

ever at her side trying to obtain the ball or prevent it from reaching its destination.

The forward catching the ball after it has been advanced to her by her own centre or by guards from the other end of the field, or obtaining it from an opponent, generally throws for the basket, and she must be able to make the goal under many difficulties and from various positions. Should the ball miss the basket the forward will have no time for regrets, it being necessary for her to turn her immediate attention to regaining possession of the ball or to preventing it from falling into the hands of the opposing guard.

The forward must have a cool head, must be calm, and able to decide and judge quickly; she must take the situation in at a glance and make the most of any, even the slightest, opportunity of forwarding the interest of her side.

The guard's principal duty is to prevent opponents from getting the ball into the basket belonging to the guard's team, and when possible to obtain the ball and throw it to the centre on her side, or across to her own forwards.

The guard's position requires that she be very skilful and constantly on the watch to defend her goal.

The players are on the field in couples, but the two standing together are always opponents; a player is never stationed by one of her own side. The game is thus in part played in couples, that is, the two placed together pay especial attention to each other and are, for the time being, each the particular opponent of the other, trying to foil all efforts of the other to gain any advantages in the game, at the same time endeavoring to assist the players on her own side.

The inner divisions for fouls, Fig. 614, are ignored except when a foul has been made; then the side opposed

to the one committing the foul has a free throw for the basket and the foul court is in use. The player having the free throw stands on the line in the centre of the circle of the foul division (Fig. 614), and must be allowed to take time to aim well and throw for the basket. No other player is permitted to stand in or pass through the limits of this court while the player with the ball is trying for the goal. The object in marking the inclosure is to prevent any other girl approaching nearer than six feet to the player throwing for the basket. The foul court must be absolutely free from all obstruction during a free throw, nor shall the player having a free throw step from the station line until the ball has entered or missed the goal.

When a player is given the privilege of a free throw, the ball cannot be tossed to any other player; it must be thrown for the basket. Should this rule be violated, the goal will not count if made, and the referee takes the ball and tosses it up in the centre as at the beginning of the game. If by chance the free player is interfered with in any way, and she fails to make the goal, she can try again, and then, in case the ball does not land in the basket, the ball is in play and the game continues.

The ball may be thrown or batted with the flat part of the hand in any direction, either with one or both hands.

While in the field a girl cannot carry the ball nor hold it longer than three seconds; she must play it from the spot where she catches it, unless she happens to be running. If while running she catches the ball, she must stop as soon as possible; should she fail to do so, in the opinion of the umpire, the umpire may call a foul. When the player captures the ball she either throws it at once or stops running as soon as possible. Allowance is made in such cases, but

the player cannot consume time by turning around without making progress in the game.

A player cannot bound the ball on the floor more than three times, and never lower than the height of the knee; however, this does not interfere with her throwing for a goal twice or more in succession.

The player who has the ball is the only one in the field who may be intentionally blocked in her way; all other players must be free from intentional interference.

The foul which disqualifies a player counts against her side.

The ball is

Out of Bounds

when it completely crosses the boundary line of the field. Should it bounce or roll back again the game continues, except if the whistle of the referee is blown; then the ball is put in play as if it had not returned to the field.

The time allowed for a game is always divided; when the first part has been played, time is called for a rest by the whistle of the time-keeper. Generally the intermission lasts ten minutes, sometimes longer, the game being resumed after the recess. While resting the players wrap themselves up to keep from taking cold, and are not permitted to drink cold water.

After each goal the referee puts the ball in play in the centre of the field; this she must also do at the commencement of the game and at the beginning of the second half of the game. At the end of the first half the sides change goals, except in case of a tie, when the game continues without changing goals until either side has made two additional points. These points may be made either from field or from fouls. The game is won by the side scoring the greater number of points during the entire game.

If the goal (in case of uprights) is moved by an opponent when the ball is on its edge, one point is scored by the side throwing the ball.

The game is decided by the winning of the most points in the actual playing time. When there are two fouls at once on opposite sides, each side has a free throw for the basket; afterward the ball is put in play from the centre by the referee. Whenever it becomes necessary for the referee to call "time," because of illness or accident to a player, play must be resumed in five minutes. If the injured player is unable to resume play

A Substitute

may take her place, or the game may start at once without her. If a substitute takes her place she cannot play again during that game.

Rules

A goal made from the field counts two points ; made from a foul, one point. If a player by mistake should throw the ball in her own basket, it counts for the opponents.

After time has been called the referee puts the ball in play by tossing it up in such a manner that it will drop near the spot where it was when time was called, unless it was held out of bounds. In this case play is resumed at the whistle of the referee as if time has not been called.

The two opponents nearest this spot when time was called vie with each other to obtain the ball after play is resumed. They are indicated by the umpire.

When the ball is held by two or more players for any length of time the referee blows her whistle, stops the play and throws the ball up from where it was held.

Whenever the ball is put in play the players who are to

first touch the ball must not stand further than two feet from the spot where the ball is to fall.

When the ball goes out of bounds and remains there, it must be returned by the player first *touching* it. There can be no interference with her returning it; that is, no portion of the person of an opponent may be outside of the field of play. The ball cannot be touched by an opponent until it has crossed the line. If either of these rules is violated, the ball is to be returned to the player who had it and the ball again put in play at the original place.

The player holding the ball may throw it in any direction into the field of play from any spot (outside of bounds) on a line drawn at right angles to the boundary line at the point where the ball crossed it. The ball must be *thrown* into the field of play. When either of these rules is violated the ball goes to the opponents at the same spot. The ball must be thrown to some player and disposed of before the player who passed it can again play it.

When a player obtains possession of the ball outside the limits of the field she is allowed five seconds to hold it; if the ball is held longer it goes to the opponents. In case of doubt in the mind of the referee as to which player first touched the ball, she tosses it up into the field of play at the spot where it went out.

When the ball is *batted*, *rolled* or *passed* from the field of play, in order *to claim exemption* from interference it must be given to the opponents at the point where it left the field of play. When it is passed to a player out of bounds the ball is given to the other side. *Carrying* the ball from the field of play is a foul. When the centres are jumping for the ball and one of them bats it to out of bounds, it is in play and goes to the other side.

A goal scored by a player while any part of her person

touches the ground out of bounds shall not count. In such a case the ball is put in play in the centre of the field.

If a player throws for the goal and the whistle of the referee, umpire, or time-keeper sounds while the ball is in the air, and the throw results in a goal, it is a count.

When the umpire's whistle sounds simultaneously with either the referee's or time-keeper's, the umpire's takes precedence.

A goal scored before the whistle can be blown for a foul made by the side scoring, does not count; but if a player while throwing for the goal is fouled by an opponent and succeeds in scoring, both count.

Two hands on a ball are necessary to secure it. In case of doubt in the mind of the referee as to which player first put her two hands on the ball, she shall toss it up at the spot where it was held by the players. In no case may a player remove the ball from the hands of an opposing player, either by *snatching* or *batting*.

The ball may not be held longer than three seconds.

The ball may not be "juggled"; *i. e.*, tossed into the air and caught again to evade holding.

Crossing field lines with any part of the body constitutes a foul.

No player may lean over or reach over another player.

No player may hand the ball to another player. The ball must be *thrown* to another player.

General Fouls

Players addressing officers.

Kicking or striking ball.

Carrying ball.

Bounding ball more than three times, lower than the knee.

Holding longer than three seconds.
Delaying game.
Tackling, holding, pushing opponents.
Snatching or batting ball from hands of opponent.
Juggling.
Crossing or stepping on the field lines.
Leaning or reaching over another player.

Fouls for Which Players May be Disqualified.

Roughness.
Striking.
Kicking.
Shouldering.
Tripping.
Hacking.
Unnecessarily rough play.

Should any question come up not covered by these rules the officers may decide the matter in accordance with the spirit of the game.

These official rules are intended especially for girls' basket ball as played in most of the well-known colleges, Vassar, Bryn Mawr, Smith, Wellesley, etc., and by the majority of schools except in and around New York, in which section both girls and boys play the boys' game. This differs from the girls' in having greater freedom and consequently more action, players being allowed to run to any part where they think they can be of most use within the extreme limits of the field. The dividing lines from side to side of the field are omitted, and the girls must be equal to greater exertion and more violent action for the boys' game.

The girls' game is considered the safest and best for them, being adapted for girls; yet some champion players

prophesy that ere long the boys' game will be the one generally played by both girls and boys. If girls enter into the boys' game they must keep in training that their strength may equal the demands. They must not shed one tear when occasionally hurt, though such accidents need not occur if all rudeness is avoided. Should one girl unintentionally run against another during the game, precious moments cannot be wasted in apologies, there being no time for either excuses or tears. While the sport is going on the player's mind should be all earnestness and determination, too intent upon the game to allow thoughts for other things. Girls will soon acquire greater moral and physical courage by playing basket ball, and sufficient nerve to keep back the tears. Their self-control will be vastly improved and their endurance, strength, quickness of action, and judgment rapidly strengthened. All these qualities are essential, not only in basket ball, but in helping one to understand the art of living.

Players should wear tennis

Slippers

in order to avoid slipping, sliding, and injuring one another with heavy heels, should one player accidentally step on the toes of another. The

Gymnasium Suit

of short, full, divided skirt, gathered zouave fashion at the knee, and a loose woollen blouse or sweater, forms a comfortable, sensible uniform for basket ball. If desired a knee-length skirt of stout material may take the place of the divided skirt, but never attempt to play in a long dress or tight clothing.

CHAPTER XXXI

SOME OF OUR OUT-DOOR NEIGHBORS AND WHERE TO LOOK FOR THEM

THE word grows broader and is more and more filled with meaning as we begin to understand that "neighbor" may embrace in its kindliness not alone the whole human race, but all the animal creation with which we come in contact.

These denizens of the woods and fields are indeed our neighbors, and so also are the queer folk whose lives are partly or wholly spent in the water. When we learn to look for them we will find life full of the beauty, the music, and the good-will of our little friends and neighbors.

Few of these out-door acquaintances force themselves upon us; they are not at all sure of their welcome, so we must keep our eyes and ears open that we may learn their haunts and meet them at least half way. While strolling in the country it is pleasant to walk along laughing and singing as we go, but we must refrain if we really wish to come near any of the bright-eyed, suspicious little creatures. They can only be approached very quietly, for wild things understand an unusual noise only as a danger signal, and will start in alarm at the least sound or sudden motion, and be up and off before we are conscious of their presence.

A little book for

Observation Notes

divided off into spaces, each space having a heading, as in Fig. 619, will be of great value in identifying the animals, birds, and insects you may meet, and in keeping such records, your interest will deepen and your love for Nature and all her children greatly increase.

Observation Notes No. Date
Location
Weather
Form
Approximate size
Markings
Action
Song or cry
Food
Nest situated
Nest composed of
Identification
Remarks
Signed

Fig. 619.

Carry the book with you, and make the notes on the spot. Do not wait until you reach home, depending upon your memory; it may sometimes play you false. Write nothing under the heading of "Identification" until you are quite sure you recognize the creature you are studying; for this one entry it will be best to wait until you can consult a reliable book on the subject, and then carefully compare your notes with what the naturalist gives as facts.

If your stroll leads you through the woods listen for the chatter of

The Squirrel

This saucy rodent belongs to a large family, with many branches and ramifications, and squirrels of some kind are to be found in almost any wooded spot.

The scolding remonstrance to your invasion of his domain will probably reach you before you catch a glimpse of him; but sit down and wait quietly, Mr. Squirrel will soon appear, and very likely his little wife will follow him. Cautious, alert, yet really unafraid, they will approach nearer and nearer, until they are quite close enough for you to mark their peculiarities and decide to which branch of their family they belong. You may even pass the compliments of the day with your little host if you speak gently and softly. They are not timid animals, and will quickly make friends with anyone who treats them kindly. In Daytona, Fla., where they are absolutely undisturbed, the squirrels are very numerous, filling the great moss-laden trees, scampering over the lawns and fences and even eating from the hands of those who will regularly feed them, all the while living in entire freedom, without restraint of any kind.

Wherever you may find the squirrels, their nest is probably close by, hidden in a hole in one of the trees. Be careful how you thrust your hand into such an opening, however, for squirrels have sharp teeth and may resent such undue familiarity. About the first of April the nest will be filled with a promising family of little ones from four to six in number, and if you can take such a family under your supervision and "grow up with them," as it were, you will be amply repaid by the amusement the merry little creatures will afford and by the opportunity to observe, with the privilege of an intimate friend, their house-keeping and manner of life.

You will know

The Red Squirrel

by his color, during the summer it is a red-brown with a white vest bordered on the sides with a dark line. He changes his coat twice a year, and his winter garment is duller and not nearly so red, while the vest is gray without the dark border.

When you find a squirrel's nest in the crotch of a tree instead of in a hole you may be pretty sure it belongs to the gray squirrel, which is said to be the most easily tamed of all its family.

Do not mistake

The Chipmunk

for a squirrel, although he does resemble one and his lively chatter seems to be in the same language. He is, in fact, sometimes called a ground squirrel, but in reality he is only a distant cousin.

You will not be so apt to find him in the interior of the woods as in more open places; his favorite promenade is the top of a stone wall or rail fence. He is a little fellow with a flat, bushy tail and well-developed cheek pouches, which he fills with seeds and nuts until his cheeks are puffed out equal to a boy's when he eats an apple.

The tawny little chipmunk of the Eastern States has two white stripes and five narrow black ones down its back. In the West there are other varieties, the little black and white striped fellow of the Rocky Mountains being the prettiest and tamest.

The chipmunk is an engaging little creature, tamer even than the squirrel, and he will often come close to the house and sometimes enter it in search of food; it is the dogs that generally drive him away, for no dog, however well behaved,

can resist chasing a chipmunk. He is easy game, for he seldom climbs a tree, and unless he can find refuge in his hole or under the wood-pile his life is soon the forfeit.

Do not look in a tree for the chipmunk's nest, you will not find it there, but perhaps at the foot of the very pine under which you are standing, or beneath the large rock which lies in your path there is a small hole opening into a little hollow, and in this underground chamber is the soft, warm nest and the store of food which the chipmunk has providently laid by. Here it sleeps through the cold winter months, waking only to eat a few nuts, seeds, or grains of corn, soon to drowse again, and remain asleep until spring has come once more.

When you see a small, brown, long-bodied animal, not much larger than a rat, running swiftly along the ground, you may be pretty sure it is our neighbor

The Weasel

His home is probably near the river or the borders of the meadow, but he hunts his game with such intelligence and persistence it is possible to meet him almost anywhere. We frequently hear this little animal spoken of, not always with praise, and it is strange he so seldom crosses our path, for he does not stand in much fear of his human neighbors. The weasel is very quick and active, and also quite inquisitive; it lives on frogs, birds, eggs, and mice, and the farmers complain that it seeks larger game in their poultry yards.

Mr. Dan Beard tells an interesting story of a walk in the woods where he found a weasel asleep in a deserted crow's nest at the top of a tall tree. It is possible the little brown intruder might have been able to explain just why the nest was empty of all save himself.

The sharpness and cunning of the weasel's character is shown in its face. A low forehead, pointed nose, eyes small and penetrating plainly denote these qualities, yet it is a most interesting little animal and well worth all the study and observation you can give it.

A very small neighbor to be found on the borders of the woods or a shady road is the pretty, harmless

Salamander

Seldom more than two and one-half inches long, this little creature is slender and daintily made, with a tail quite the length of its head and body. Its skin is smooth, not scaled like the lizard's, and is generally brilliant in color. One variety is bright red, darker on the back, where it has spots of a brighter red encircled with dark rings. I have found many of them in Pike County, Pa., and always in damp places, though never in the water. There is another kind that lives in the water, but my little red friends, while loving dampness, remain always on land. You will generally find them under stones or logs, and after a shower they are also to be met in the open, though they do not travel far from their haunts. Take one up in your hand and examine the delicate forefeet, so much like fairy hands. They will cling to your finger in the most winning fashion and you may examine the little animal at leisure, for it is clean and harmless. If you wish to keep the salamander for further study, place it in a perforated box with damp moss or even damp blotting-paper, and remember to keep it moist, otherwise it will simply dry up. I know whereof I speak, for a friend who was with me in the mountains, wishing to carry two of the salamanders home with her, placed them in a box without moisture of any kind and when we lifted the lid the

next morning the poor little creatures were dead and as dry as two sticks.

The salamander feeds on small insects, but I have never seen them eat in captivity. That they may be safely transported and established in new homes has been proved, for a gentleman from Seattle, Wash., who was visiting at our Pike County, Pa., camp, became so deeply interested in these creatures he took a pail of them across the continent, and at last accounts they were living in his garden, to all appearances quite as comfortably as in their native woods.

On the trunks of some of the great trees you are passing you may possibly see a number of queer, semi-transparent shells. These are the cast-off armor of

The Cicadas

Locusts you will probably call them, but that name rightly belongs to quite another insect. Perfect in every detail, even to the great bulging eyes, the cicada's little coat of mail clings to the tree with its six pairs of claws like a live creature, and only a split down its back shows its emptiness and tells how the cicada crept from the old into a newer and fuller life.

The shells one usually finds belong to quite a large black and green insect, one of the more common species of cicada. This is called the dog-day harvest fly, and requires but two years to develop, while the smaller red and black variety is known as the "seventeen year locust," because it spends seventeen years of its life underground before it reaches maturity. All this while it bears the name of nymph. A pretty name for the young insect, isn't it?

The nymph began life as an egg which its mother deposited, with a number of others, in a slit she made in a twig of a tree. For six weeks it lay snugly in its narrow bed,

then came forth a tiny white creature, with little legs which carried it about in a lively manner. Its mouth was simply a hollow tube which would change into jaws later on. For a while the nymph was happy in its new-found life, then suddenly a longing for quiet seemed to come over it and it dropped to the ground, there to bury itself in the earth, which was to be its home for many years.

Cicada and Shell.

Down in the mysterious darkness, in that busy world where so much we do not understand is going on, the little nymph grew very slowly for a year, nourished by the juices of the roots he found near him and which he sucked up through his tube-like mouth. Then he shed his first skin for another, which gave him greater freedom for further growth. After a time this skin was also discarded, another and another, until, we are told, six times his garment was changed while yet he was deep in the earth, with no one to see and admire his new attire. Then when seventeen long years were passed and his days of preparation were accomplished, he dug his way up into a new world at the dictate of a new impulse, and one evening he emerged to find himself in a goodly company of his kind, all intent upon reaching a still greater height. The tree under which

he had lived so long was his goal, and up this he made his way for some distance, then, forcing his little claws into the bark, he clung to his place awaiting his final transformation.

Presently his nymph-skin opened down the back and the cicada, a nymph no longer, crawled slowly out. White again as when he first saw the light, except for two black spots on his back, soft and helpless he clung anew to the bark. At first his wings were so much a part of his body you would have thought he had none, but almost immediately they began to unfold and grow, becoming transparent and firm as he waved them slowly back and forth. During the night his color was marvellously changed from white to black and red, and the next morning came his season of rejoicing. With all faculties fully alive, he joined the chorus of the other cicadas and the woods were made to resound with their high, rasping notes.

By the way, do you know

How the Insects Sing?

Or, rather, they do not sing, the noise they make is instrumental, not vocal, and their instruments are usually carried under their wings, a part of themselves to be played upon at will, when and where they choose.

The cicada's instrument is a kind of drum, and, as if one would not be sufficiently noisy, he carries two, one behind each of his hind wings. He has no drum-sticks, but vibrates his drums until the natural buzzing sound rises almost to a shriek. Other insects play on other instruments, but, however the sound is made, each species has a note of its own, not to be mistaken for that of any other.

Deep in the forests where the dead leaves and pine-needles cover the ground you will be likely to find the well-known

Indian Pipe

the delight of all children and an object of interest to everyone. This wonderful little ghost flower, so purely, white and so quickly blighted by exposure to sunlight appears to live for its beauty alone. As far as we know it is of absolutely no use, and does not even provide for itself, as do other plants. It is a root parasite and draws its nourishment from the roots of the pine upon which it has fastened itself. The stem as well as the blossom is silvery white, it has no foliage, and the flower at the end of the stalk bends its head as though ashamed of its idle life, but it continues to live on the vital juices of the roots and we call it the Indian Pipe because it somewhat resembles the long-stemmed Indian calumet, or pipe of peace. The botanists, however, know it as the *Monotropa Uniflora.*

Another beautiful inhabitant of the deep woods is the

Moccasin Flower

which arrays itself every summer in its spotted pink or yellow dress, and stands as proudly erect on its slender stalk as though troops of admirers were to pass its way, when, in fact, it is rarely seen save by those who seek it. As its name suggests, it resembles an Indian moccasin in shape, the hanging pouch forming the toe, while the heel is clasped by five pointed and twisted petals. Over the opening of the pouch there is a little flap, which has much to do with the fertilization of the flowers. The botanical name of this little orchid is the *Cypripedium*, and some call it lady-slipper, though it looks not at all like your slipper or mine.

As you walk on under the interlacing branches of the close-growing trees, look about for evidences of the

Engraver Beetle

Pull the bark from a dead trunk or limb and you will probably find its trade-mark. Fig. 620 is one pattern, but there are various others, among them a spiral design cut as smoothly as though done with an engraver's chisel.

Fig. 620.

These little workers in wood are but babies, being the larvæ of the engraver beetle, which, deposited as eggs under the bark of a dead tree, turn into worm-like creatures and eat their way along the surface of the sap-wood, tracing the cabalistic designs in their progress. When fully developed the beetle is still a wee thing, the largest being not over a quarter of an inch in length. Some are brown in color and some black.

Drop your eyes now and look for

Footprints

in the soft earth. You will frequently find them around ponds and the margin of brooks. They make a most interesting study, and will soon enable you to learn which of your forest neighbors has visited the spot before you.

A small, delicate impression, much like that of a dainty little hand, will show that

The 'Coon

has been along, and this is all you are likely to see of him unless you take a moonlight stroll, for Master 'Coon shuns daylight, and is about only at night. Being a pretty and an

intelligent little animal, he is sometimes tamed and even allowed the freedom of the house, like a dog or cat, but 'coons are as mischievous as monkeys, and very frequently the little hands are used to work disaster among the household gods. When that occurs a chain is used to keep Master 'Coon out of further trouble and consequent punishment.

The 'coon's fur is long, thick, and of a pepper-and-salt gray. Its tail is decorated with rings, and its broad white face is marked with three radiating black lines across the forehead and black settings to its eyes.

Though all you find is the footprint of this nocturnal little fellow you may rest assured that somewhere, just above your head perhaps, he is snugly curled up in the hollow of a dead limb awaiting the darkness, when he will sally forth to seek his supper.

In the softly creeping twilight, when the woods become more mysterious, and one's nerves are almost like the wild things in their quick response to sudden noises, the night prowlers begin to awake and stir about. Before darkness quite settles down is the time to make the acquaintance of the night birds, nocturnal insects, and some of the small animals which avoid the garish light of day.

Though they love darkness better than light these little creatures are just as harmless as the ones you have seen in the genial sunshine. Do not be startled, then, if a small dark body suddenly sails through the air near you, but watch it in its flight, see how it courses downward, always downward, on a gradual incline until, with a short upward curve, it alights on a low branch or trunk of a tree. From the summit of a tall pine its flight has been, perhaps, fifty yards, yet it has no wings and in the dim light you will see before you only a big-eyed, satin-coated little squir-

rel, and you will have met, it may for the first time, your neighbor

The Flying Squirrel

Look closely and notice that he wears a suit of brownish gray, white underneath, bordered with black, which fits him so loosely about the legs and sides that when he stretches out and flattens himself he may almost be said to be web-legged, and can sail through the air like a parachute.

Flying Squirrel.

The natural home of the flying squirrel is a hole in a tree, where he makes a soft nest, deep enough to burrow into until completely hidden. But a hole anywhere, except in the ground, attracts him. Whole families will take up their quarters in an unoccupied house if they can squeeze themselves through some crack or crevice, and will frequently refuse to vacate when the rightful owner appears and claims the premises.

I have several times made pets of the young flying squirrels, and they are the prettiest, most friendly and entertaining little things imaginable, as tame as kittens and as harmless. They are nocturnal in their habits, sleeping all day in their woolly nests and scampering about all night, full of mischief and merry play.

If you wake one of the baby squirrels from its nap and take the drowsy little thing in your hands you will love it immediately; it is so soft, so babyish, so unresisting.

A rare but most beautiful dweller in the woods is the

Luna Moth

named for the moon and sometimes called the "queen of night." One evening just at dusk it was my good fortune

to find a luna moth clinging to a forest tree by the roadside. It had but recently emerged from its chrysalis and was slowly moving its delicate wings back and forth, drying them in the warm night air and strengthening them for flight.

The *Tropæa luna*, as the scientists call it, is one of the giant silk-worm moths. It has the large, fuzzy body of the

Luna Moth.

moth, with the feather-like antennæ; but its wings are unusual in shape. Nearest the tail they are extended to form long appendages, which curve gracefully outward. The color is a delicate light green, the edges of the fore-wings are bordered with a band of purplish brown, and they are further ornamented with four large eyes.

Look on the ground under the walnut, hickory, or other hard-wood trees for the cocoon, as it is on these trees the larva feeds.

When daylight comes again seek the path which leads through

and once more you are among the little folk who love the warm, bright sunshine.

The birds leave the shade to sit on the old rail fence and sing joyously. You will see the busy little wren here, tripping about importantly, and the song-sparrow, too, which loves to perch on the top rail and sing its heart away. Hidden deep in the tangled grass or nestled amid the clover you may find the nest of the bobolink. Do you know the lines which occur in one of Saxe Holm's stories:

> "I wonder what the clover thinks?
> Intimate friend of the bobolinks."

When you remember these you will remember to look for the bobolink where you see the red clover.

There is a concert going on at this very minute; do you hear it? The high soprano is taking the lead, the soft, gurgling notes of the contralto are coming in, and now the whole chorus has burst into song and one of the sweetest of Nature's anthems is being given. You must hear it, some of you, for no matter what the season, in this great land of ours, somewhere the warm summer sun is shining, somewhere, without money and without price, these beautiful songsters are pouring out their souls in exquisite melody.

Stop and think what the birds are doing for you; think of what life would be without them and how near akin they are to all that is joyous and bright within you; read "The Birds of Killingworth" in Longfellow's "Tales of a Wayside Inn" and then wear the dead bodies of your little friends on your hats if you can.

As you cross the pasture be on the lookout for the

Woodchuck's Hole

It is generally on the side of a hill or knoll, and in front of it is a small pile of earth which the woodchuck has taken out in his excavations. The hole is large enough for a small dog to enter, and leads to several tunnels, some of them twenty or twenty-five feet long. If you remain quietly near for awhile perhaps you will be rewarded by seeing the

Woodchuck and His Hole.

woodchuck, or ground-hog, as he is sometimes called, peep cautiously out of his front door and then come boldly forth to look about and see what is going on in the outer world. Make a sudden noise and he will sit up on his haunches with hanging forefeet, like a begging dog, and then dart into his hole to remain in hiding until it seems safe for him to venture out again.

The woodchuck is a snub-nosed little animal, a trifle larger than a good-sized rabbit. Its tail is short and bushy and its hair long, coarse, and of a brownish color, ears low and inconspicuous, and eyes round and bright. At the ap-

proach of winter he retires to his nest, which is in a chamber at the farthest end of his longest tunnel, there to sleep or hibernate until spring. A popular legend has it that on the second day of February the ground-hog—he is always a ground-hog in this connection—is sure to be up and out to see how high the sun is and investigate the general progress of things.

You know the rest of the story; how he prophesies an early or late spring by his actions on this important day. If he stays out we will have an early spring; if he goes back we will have winter weather for six weeks longer; and his going and staying are determined by the sun. This is because the ground-hog is supposed to be absurdly afraid of his shadow, which he has not seen for so long, and if the bright sunshine reveals it to him he is said to return ignominiously to his hole, where he will remain for another six weeks. If, on the other hand, the day proves cloudy, and there are no shadows to alarm him, he concludes that he has slept quite long enough, that there will be no more winter, and that it is high time to be up and about his business.

The farmers hunt the woodchuck because of its voracious appetite for green things. They say it takes more than its share of the farm products, and they make forcible objections.

June is the time to find the baby woodchucks, which in this month play like puppies around the entrance to their home.

And now these few remaining pages must be devoted to our small neighbors of

The Sea-shore

To some of them at least; a volume would not give space for all.

It is on rocky coasts or the shores of bays and inlets that you will find most of the creatures which make their home on the borders of the vast and mighty ocean. Along a rugged shore like that of Maine, where the storms and great breakers carry the water high upon the rocks, little pools are formed, and in one of these natural aquariums there is enough life for a summer's study.

Undisturbed by the rising and falling tide, the water is transparently clear, and you can see distinctly all the inhabitants of this little water-world. Clinging to the rocky sides are what appear to be silvery pink moss and brilliant aquatic flowers. Lying at the bottom or amid the jagged stones are round, prickly looking balls which resemble chestnut burs, some of them no larger than a tiny pearl button. So much like vegetables do all these things appear, it seems hardly possible they are animals; yet the moss is sometimes called the

Nurse of the Jelly-fish

and some of the small bubble-like bags clinging to its stems, which give it the silvery appearance, are full of eggs that will hatch into minute jelly bodies. After various transformations and subdivisions these bodies develop into the wonderfully beautiful and fairy-like jelly-fish which you find swimming in the deep waters of the bay, some of them trailing long, filmy, lace-like skirts or veils as they move.

The delicate red, green, yellow, pink, and lavender blossoms, which add so much to the beauty of the pool, are

Sea-anemones

Animals, too, every one, living only on animal food, which they find and absorb in a peculiar manner. The fringed petals are in reality tentacles that reach out and draw food

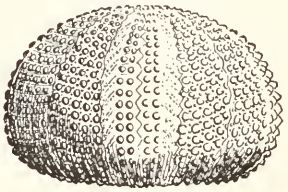
into the mouth at the centre, from which it is taken into the stomach just below.

How the baby sea-anemones are born, how they are cared for by their mother, how they are at first "foot loose" and afterward become fixtures on the rocks, you must study out for yourselves; the description here is but an introduction at best and must be necessarily brief.

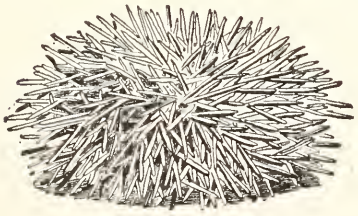
The queer-looking green burs, which you will see moving about if you watch them closely, are the

Sea Urchins

You have, perhaps, found some of their beautiful shells on the beach, empty of all life and bleached quite white by the sun. Where the green spines grew are regular rows of bead-like projections, looking like strings of pearls; but, lovely and pure as the shells are, they cannot possibly be as interesting as the real creatures, full of life, crawling about at the bottom of the crystal pool on the tips of their prickly looking spines.



Shell of Sea Urchin.



Sea Urchin.

I have never found a live sea-urchin except in these quiet pools, probably because they do not like to subject themselves to the buffeting waves, and when in deep water hide in the crevices of the rocks or bury themselves in the seaweed.

Unlike the sea-anemone, they are vegetarians and seldom indulge in animal food. The mouth is underneath the little animal, where you find the round hole in the shell.

too you will probably see crawling over the rocks at the bottom of the pool. Although called by that name, these strange, five-fingered creatures are no more fish than the sea-urchins, and their life is not so much of the water as of the ground below. The starfish may swim, but it greatly prefers gliding about over the slippery stones and sandy bottom, searching for the small shellfish which form its food. If you will place a starfish in a small fish globe filled with salt water, or in any clear glass vessel that is large enough, you can see its numberless feet, which are little tubes projecting from the under side of the five rays. This wonderful waving mass of tube feet is quite concealed when we look at the animal from above, and until we have discovered them its rapid movements seem very marvellous.

There are barnacles looking like a part of the rock to which they are firmly attached, tiny crabs darting hither and thither, various species of small mollusks and numerous other forms of salt-water life to be found in Nature's beautiful rock aquariums, but we must leave you to make their acquaintance alone, while wishing you much joy and happiness in your intercourse with these and all of your little neighbors.

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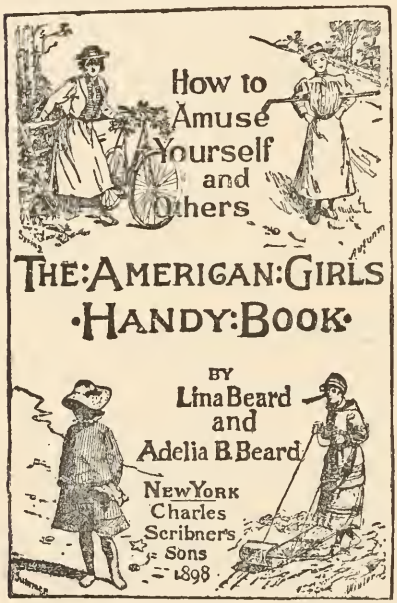

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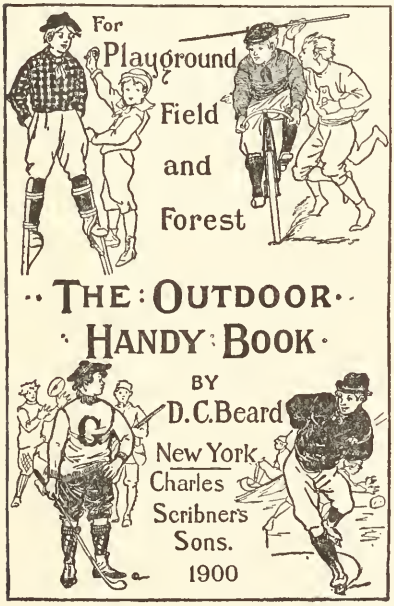

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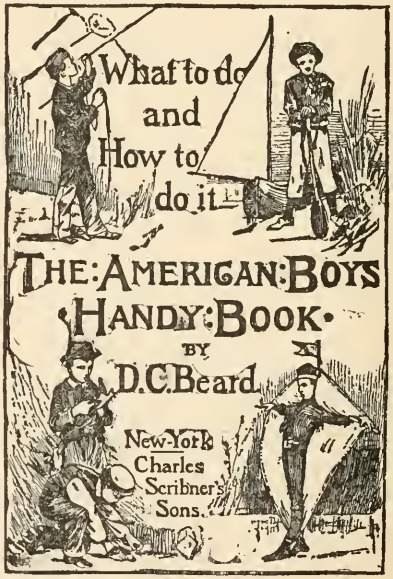

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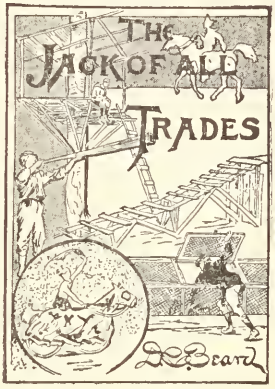

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